

Nalanda Open University
Annual Examination - 2011
B.A. Tourism (Honours), Part-III
Paper-V (Management in Tourism)

Time: 3.00 Hrs.

Full Marks: 80/70

किन्हीं पाँच प्रश्नों के उत्तर लिखिए। सभी प्रश्नों के अंक समान हैं ।

1. एक उद्यमी बनने के लिए आवश्यक कौशलों का उल्लेख कीजिये।
Mention the skills required to be an entrepreneur.
2. नियंत्रण के विभिन्न प्रकारों तथा नियंत्रण प्रक्रिया के विभिन्न चरणों की व्याख्या कीजिये ।
Explain the different types of control and the various steps in the control process.
3. पर्यटन उद्योग में मुख्य व्यवसाय स्वरूपों तथा उनके लाभ और हानियों की व्याख्या कीजिये।
Define the main business forms in tourism industry and their advantages and disadvantages.
4. एक वित्तीय प्रबंधक के प्रमुख उत्तरदायित्वों की चर्चा कीजिये।
Discuss the major responsibilities of a financial manager.
5. एक योजना तैयार करने के लिए आवश्यक विभिन्न चरण क्या हैं?
What are the different steps required to formulate a project.
6. पर्यटन में विपणन मिश्रण के विभिन्न अवयव क्या हैं? स्पष्ट कीजिये ।
What are the different components of Marketing Mix in Tourism? Explain.
7. टूर ऑपरेटर तथा एजेंट के मध्य विभेद कीजिये । यात्रा व्यवसाय में विभिन्न अनुबन्ध क्या हैं?
Differentiate between tour operators and travel agent. What are the linkages in travel trade?
8. पर्यटन में जन-सम्पर्क के महत्व की विवेचना कीजिये।
Discuss the importance of Public Relation in Tourism.
9. अधिवेशनों के आयोजन के लिए कौन से प्रबन्धकीय कार्य जरूरी हैं? टिप्पणी कीजिये?
What are the managerial tasks involved in organising conventions? Comment.
10. निम्नलिखित में से किन्हीं **दो** पर टिप्पणी लिखिये :
Write notes on **Two** of the following:
 - (क) लाभ-हानि पत्रक
Profit and Loss statement
 - (ख) बैलेंस-शीट
Balance-Sheet
 - (ग) लाभ-विश्लेषण
Profitability Analysis
 - (घ) ब्रेकइवेन प्वाइंट
Break Even Point

Nalanda Open University
Annual Examination - 2011
B.A. Tourism (Honours), Part-III
Paper-VI (Indian Culture: Perspective for Tourism) TS-4

Time: 3.00 Hrs.

Full Marks: 80/70

Answer any Five Questions. All questions carry equal marks.
किन्हीं पाँच प्रश्नों के उत्तर लिखिए । सभी प्रश्नों के अंक समान हैं ।

1. Discuss "Cultural involution" in the case of Bali and Toraja. What significance can it have in Indian case?
बाली एवं तोराजा का उदाहरण देते हुये सांस्कृतिक जुड़ाव की विवेचना कीजिये । भारत के संदर्भ में इसका क्या महत्व है?
2. Give an account of the main features of Bhakti and Sufi movements in India.
भारत में भक्ति एवं सूफी आन्दोलनों की मुख्य विशेषताओं का वर्णन कीजिये ।
3. Analyse the essential elements that constitute Indian music.
भारतीय संगीत के अनिवार्य तत्वों का विश्लेषण कीजिये ।
4. Account for the various forms of Indian Theatre. Examine the contribution of theatre in the promotion of tourism.
आधुनिक भारतीय रंगमंच के विभिन्न रूपों का वर्णन कीजिये । पर्यटन के विकास में रंगमंच के योगदान का परीक्षण कीजिये ।
5. Write an essay on the stupa and rock-cut architecture in Ancient India.
प्राचीन भारत में स्तूप और गुप्ता स्थापत्य पर एक निबंध लिखिये ।
6. Mention the roles and importance of the Museum in the promotion of Tourism.
पर्यटन के विकास में संग्रहालय की भूमिका एवं महत्व का वर्णन कीजिये ।
7. Differentiate between Hindi Cinema and regional cinema. Analyse in brief the achievements of Indian Cinema.
हिन्दी सिनेमा एवं क्षेत्रीय सिनेमा की भिन्नता का वर्णन कीजिये । भारतीय सिनेमा की उपलब्धियों का संक्षेप में विश्लेषण कीजिये ।
8. Throw light on the salient features of north Indian cities in the 6th century B.C.
छठी शताब्दी ईसा पूर्व में उत्तर भारतीय नगरों की प्रमुख विशेषताओं पर प्रकाश डालिये ।
9. Describe the role of mass media in the development of Tourism.
पर्यटन के विकास में जनसंचार माध्यमों की भूमिका का वर्णन कीजिये ।
10. Define customs and rituals. Discuss their roles and functions in Indian society.
रीति-रिवाजों एवं अनुष्ठानों को परिभाषित कीजिये । भारतीय समाज में इनकी भूमिकाओं एवं कार्यों की विवेचना कीजिये ।



Nalanda Open University
Annual Examination - 2011
B.A. Tourism (Honours), Part-III
Paper-VII (Ecology, Environmental and Tourism) TS-5

Time: 3.00 Hrs.

Full Marks: 80/70

Answer any Five Questions. All questions carry equal marks.
किन्हीं पाँच प्रश्नों के उत्तर लिखिए । सभी प्रश्नों के अंक समान हैं ।

1. What is an ecosystem? Give an account of its components.
परिस्थितिकी तन्त्र क्या है? इसके घटकों का विवरण दीजिये ।
2. Account for the effect of tourism on environment and suggest a few solutions for any adverse impacts.
पर्यावरण पर पर्यटन के प्रभावों का वर्णन कीजिये एवं दुष्प्रभावों को दूर करने का सुझाव दीजिये ।
3. Define the word "Conservation and give a brief history of conservation in modern time.
"संरक्षण" को परिभाषित कीजिये एवं आधुनिक काल में संरक्षण का एक संक्षिप्त इतिहास लिखिए ।
4. Discuss the concept of responsible tourism. Elaborate its benefits.
उत्तरदायी पर्यटन की अवधारणा की विवेचना कीजिये । इसके कार्यों को सविस्तार समझाइये।
5. Write an essay on the politics of Environment.
पर्यावरण की राजनीति पर एक निबन्ध लिखिए ।
6. Analyse the role of visitor behaviour in environmental tourism.
पर्यटन में पर्यटकों के व्यवहार की भूमिका का विश्लेषण कीजिये ।
7. Give an account of the impact of wildlife in India.
पर्यटन के भारत के वन्य जीवन पर प्रभावों का विवरण प्रस्तुत कीजिये ।
8. Describe the salient features of Indian Tourism policy 1982 and Perspective Plan 1988.
भारतीय पर्यटन नीति, 1982 एवं 1988 की संदर्भ योजना के विशिष्ट अभिलक्षणों का वर्णन कीजिये ।
9. Examine the importance of islands and beaches for promoting tourism in India.
भारत में पर्यटन प्रोत्साहन के लिए द्वीपों एवं समुद्र तटों के महत्व का परीक्षण कीजिये ।
10. Write any two notes of the following:
निम्नलिखित में से किन्हीं दो पर टिप्पणी लिखिये :-
 - (a) Aquatic Biomes : जलीय वायोम
 - (b) Multiplier Effect : गुणात्मक प्रभाव
 - (c) Acts and Laws : अधिनियम तथा कानून



Nalanda Open University
Annual Examination - 2011
B.A. Tourism (Honours), Part-III
Paper-VIII (Tourism Marketing) TS-6

Time: 3.00 Hrs.

Full Marks: 80/70

Answer any Five Questions. All questions carry equal marks.
किन्हीं पाँच प्रश्नों के उत्तर लिखिए । सभी प्रश्नों के अंक समान हैं ।

1. Define and distinguish between marketing and selling. Explain the importance of marketing in tourism industry.
विपणन और विक्रय को परिभाषित कीजिये एवं दोनों में अन्तर बताइये । पर्यटन उद्योग में विपणन के महत्त्व की व्याख्या कीजिये ।
2. How can you analyse the competitiveness of a market? Explain the strategic options to face competition.
बाजार प्रतियोगिता का आप कैसे विश्लेषण कर सकते हैं? प्रतियोगिता का सामना करने के लिए रणनीतिक विकल्पों की व्याख्या कीजिये ।
3. Elucidate the importance of local bodies in implementing a tourism project.
पर्यटन उद्योग को बढ़ावा देने के लिए स्थानीय निकायों के महत्त्व पर प्रकाश डालिये ।
4. Discuss the importance of society responsible marketing.
सामाजिक उत्तरदायी विपणन के महत्त्व की विवेचना कीजिये ।
5. Explain the factors that need to be considered in product designing in tourism.
पर्यटन में उत्पाद प्रारूप निर्माण के लिए आवश्यक कारकों की व्याख्या कीजिये ।
6. Analyse the importance of familiarization in tourism promotion.
पर्यटन के विकास में परिचय यात्राओं के महत्त्व का विश्लेषण कीजिये ।
7. Review the importance of technology in tourism marketing.
पर्यटन विपणन में प्रौद्योगिकी के महत्त्व की समीक्षा कीजिये ।
8. Write an essay on airlines marketing.
हवाई सेवाओं के विपणन पर एक निबन्ध लिखिये ।
9. Account for the role of intermediaries in tourism industry.
पर्यटन उद्योग में बिचौलियों की भूमिका का विवरण प्रस्तुत कीजिये ।
10. Discuss the role of seasonality in tourism marketing.
पर्यटन विपणन में मौसमीयता की भूमिका की विवेचना कीजिये ।

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Nalanda Open University
Annual Examination - 2011
B.A. Economics (Honours), Part-III
Paper-V

Time: 3.00 Hrs.

Full Marks: 80/70

Answer any *Five* Questions. All questions carry equal marks.
किन्हीं पाँच प्रश्नों के उत्तर लिखिए । सभी प्रश्नों के अंक समान हैं ।

1. Critically explain Harrod-Domar model.
हैरड-डोमर मॉडल की आलोचनात्मक व्याख्या करें ।
2. Describe the characteristics of less developed countries. How can these be removed?
अल्प-विकसित देशों के लक्षणों का वर्णन करें । इन्हें कैसे दूर किया जा सकता है?
3. Discuss the growth model of Adam Smith.
एडम स्मिथ के विकास मॉडल की विवेचना करें ।
4. Analyse the objectives and achievements of land reforms programmes in India.
भारत में भूमि सुधार कार्यक्रमों के उद्देश्यों एवं उपलब्धियों का विश्लेषण करें ।
5. What is tariff? Describe different types of tariff.
प्रशुल्क क्या है? विभिन्न प्रकार के प्रशुल्कों का वर्णन करें ।
6. Throw light on the importance of external resources for economic development and explain its merits and demerits.
आर्थिक विकास के लिए वाह्य संसाधनों के महत्व पर प्रकाश डालें तथा इसके गुण-दोषों की व्याख्या करें ।
7. Throw light on the need for planning.
नियोजन की आवश्यकता पर प्रकाश डालें ।
8. Throw light on the importance of environment. Discuss the impact of population explosion on environment.
पर्यावरण के महत्व पर प्रकाश डालें । जनसंख्या विस्फोट का पर्यावरण पर पड़ने वाले प्रभावों का विवेचन करें ।
9. Write notes on any two of the following:
निम्नलिखित में से किन्हीं दो पर टिप्पणी लिखें :
 - (a) Measures for control of water pollution?
जल-प्रदूषण नियंत्रण के उपाय
 - (b) Measures for control of air pollution
वायु-प्रदूषण नियंत्रण के उपाय
 - (c) Sources of land pollution
भूमि-प्रदूषण के स्रोत
10. Describe the objectives of International Monetary Fund (IMF) and mention the effects of this institution on developing countries.
अन्तर्राष्ट्रीय मुद्रा कोष के उद्देश्यों का वर्णन करें तथा विकासशील देशों पर इस संस्था के प्रभावों का उल्लेख करें ।

Nalanda Open University
Annual Examination - 2011
B.A. Economics (Honours), Part-III
Paper-VI

Time: 3.00 Hrs.

Full Marks: 80/70

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किन्हीं पाँच प्रश्नों के उत्तर लिखिए । सभी प्रश्नों के अंक समान हैं ।

1. Explain the meaning of international economics and throw light on its importance.
अन्तर्राष्ट्रीय अर्थशास्त्र का अर्थ स्पष्ट करें तथा इसके महत्व पर प्रकाश डालें ।
2. Discuss the opportunity cost theory of international trade.
अन्तर्राष्ट्रीय व्यापार के अवसर लागत सिद्धांत की विवेचना करें ।
3. Explain the impact of international trade on economic development.
अन्तर्राष्ट्रीय व्यापार का आर्थिक विकास पर पड़ने वाले प्रभावों को स्पष्ट करें ।
4. What is terms of trade? Discuss its impact on underdeveloped countries.
व्यापार की शर्त क्या है? अल्पविकसित देशों पर इसके प्रभावों की विवेचना करें ।
5. What is quota? What are its different types? Explain its merits and demerits.
कोटा क्या है? यह कितने प्रकार का होता है? इसके गुण-दोषों की व्याख्या करें ।
6. What is balance of payments? Explain the causes of disequilibrium in balance of payments.
भुगतान संतुलन क्या है? भुगतान में असंतुलन के कारणों की व्याख्या करें ।
7. What are the objectives and functions of World Bank? What benefits India has derived from World Bank.
विश्व बैंक के उद्देश्य एवं कार्य क्या हैं? भारत को इससे क्या लाभ हुआ है?
8. What steps have been taken by the government of India in recent years for import substitution and export promotion? Explain.
आयात प्रतिस्थापन और निर्यात संवर्धन के लिए हाल के वर्षों में भारत सरकार द्वारा क्या कदम उठाये गये हैं? व्याख्या करें ।
9. In the opinion of Gunnar Myrdal, Rural Prebisch and H.W. Singer international trade creates obstacles in the economic development of underdeveloped countries. Examine their statement.
गुन्नार मिर्डल, रॉल प्रेविच और एच०डब्लू०सिंगर मानते हैं कि अन्तर्राष्ट्रीय व्यापार अल्पविकसित देशों के आर्थिक विकास में बाधा उत्पन्न करता है । उनके कथन का परीक्षण करें ।
10. Write notes on any two of the following:
निम्नलिखित में से किन्हीं दो पर टिप्पणी लिखें :
 - (a) Convertibility of Rupee
रूपये की परिवर्तनीयता
 - (b) Optimum Tariff
अनुकूलतम प्रशुल्क
 - (c) Visible and invisible-trade
दृश्य एवम् अदृश्य व्यापार

Nalanda Open University
Annual Examination - 2011
B.A. Economics (Honours), Part-III
Paper-VII (Agricultural Economics)

Time: 3.00 Hrs.

Full Marks: 80/70

Answer any *Five* Questions. All questions carry equal marks.
किन्हीं पाँच प्रश्नों के उत्तर लिखिए । सभी प्रश्नों के अंक समान हैं ।

1. Describe economic and social infrastructure in rural areas.
ग्रामीण क्षेत्रों में आर्थिक एवं सामाजिक संरचना का वर्णन कीजिए ।
2. What do you mean by regional disparity? Explain the efforts made by the government to reduce it.
क्षेत्रीय विषमता से आपका क्या तात्पर्य है? इसे कम करने के लिए सरकार द्वारा किए गए प्रयत्नों की व्याख्या कीजिए ।
3. Examine the progress and policy of land reforms in India.
भारत में भूमि सुधार की प्रगति और नीति का परीक्षण कीजिए ।
4. Describe the salient features of national agricultural policy 2000.
राष्ट्रीय कृषि नीति 2000 के प्रमुख तत्वों का वर्णन कीजिए ।
5. Evaluate the progress of agriculture in India.
भारत में कृषि की प्रगति का मूल्यांकन कीजिए ।
6. Describe main sources of agricultural credit in India.
भारत में कृषि साख के प्रमुख स्रोतों का वर्णन कीजिए ।
7. What is meant by food security? What steps have been taken by the government to ensure food security?
खाद्य सुरक्षा का क्या अर्थ है? इसे सुनिश्चित करने के लिए सरकार द्वारा क्या कदम उठाये गए हैं?
8. Describe the drawbacks of public distribution system in India. How these drawbacks have been removed by targeted Public distribution system?
भारत में सार्वजनिक वितरण प्रणाली के दोषों का वर्णन कीजिए । लक्षित सार्वजनिक वितरण प्रणाली द्वारा इन्हें किस प्रकार दूर किया गया है?
9. Throw light on the objectives and need for agricultural price policy.
कृषि कीमत नीति के उद्देश्यों और आवश्यकता पर प्रकाश डालिए ।
10. What programmes have been implemented by the government of India to reduce rural unemployment? Explain.
ग्रामीण बेरोजगारी कम करने के लिए भारत सरकार द्वारा कौन-कौन से कार्यक्रम लागू किए गए हैं? व्याख्या कीजिए ।

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: सिर्फ 8वें पत्र की परीक्षा की तिथि में परिवर्तन की सूचना :

नालन्दा खुला विश्वविद्यालय का षष्ठम दीक्षान्त समारोह, दिनांक-21.02.2011 को निर्धारित है, इसलिए आपके सिर्फ 8वें पत्र की परीक्षा अब दिनांक-22.02.2011 को 03.30 बजे से 06.30 बजे तक सम्पन्न होगी । सिर्फ आठवे पत्र की परीक्षा की तिथि एवं समय में परिवर्तन किया गया है । शेष परीक्षा पूर्व निर्धारित कार्यक्रम के अनुरूप होंगी ।

Nalanda Open University
Annual Examination - 2011
B.A. Economics (Honours), Part-III
Paper-VIII (Industrial Economics)

Time: 3.00 Hrs.

Full Marks: 80/70

Answer any *Five* Questions. All questions carry equal marks.
किन्हीं पाँच प्रश्नों के उत्तर लिखिए । सभी प्रश्नों के अंक समान हैं ।

1. Define industrialisation and describe its indicators. How would you classify industries?
औद्योगीकरण की परिभाषा दें तथा इसके संकेतकों (लक्षणों) का वर्णन करें । उद्योगों का वर्गीकरण आप किस प्रकार करेंगे?
2. What do you mean by public sector? Discuss its contribution to the economic development of India.
सार्वजनिक क्षेत्र से आप क्या समझते हैं? भारत के आर्थिक विकास में इसके योगदान की विवेचना करें ।
3. What is market structure? Explain the classification of market.
बाजार संरचना क्या है? बाजार का वर्गीकरण बतावें ।
4. What is meant by regional imbalance? What efforts have been made by the government to remove it?
क्षेत्रीय असंतुलन का क्या अर्थ है? इसे दूर करने के लिए सरकार द्वारा क्या प्रयास किए गए हैं?
5. Explain the following: (निम्नलिखित की व्याख्या करें:)
(a) Agro-based industries (कृषि आधारित उद्योग)
(b) Rural industrialization (ग्रामीण उद्योगीकरण)
6. What is industrial sickness? Throw light on its causes and suggest remedies.
औद्योगिक रूग्णता क्या है? इसके कारणों पर प्रकाश डालें तथा उपचार का सुझाव दें ।
7. What is institutional finance? Describe its main sources.
संस्थागत वित्त क्या है? इसके प्रमुख स्रोतों का वर्णन करें ।
8. What is globalisation? Analyse its impact on Indian industries.
वैश्वीकरण क्या है? भारतीय उद्योगों पर इसके प्रभाव का विश्लेषण करें ।
9. Evaluate economic reforms in India.
भारत में आर्थिक सुधारों का मूल्यांकन करें ।
10. Give your acquaintance with industrial legislation. What are its objectives? Describe in brief the industrial legislations in India.
औद्योगिक कानून से अपना परिचय दें । इसके क्या उद्देश्य हैं? भारत के औद्योगिक कानूनों का संक्षेप में वर्णन करें ।

Nalanda Open University
Annual Examination - 2011
B.A. Hindi (Honours), Part-III
Paper-V (हिन्दी साहित्य का इतिहास)

Time: 3.00 Hrs.

Full Marks: 80/70

किन्हीं पाँच प्रश्नों के उत्तर लिखिए। सभी प्रश्नों के अंक समान हैं ।

1. हिन्दी साहित्य के काल विभाजन पर प्रकाश डालिए ।
2. आदिकाल को वीरगाथा काल कहना कहाँ तक उचित है । विचार कीजिए ।
3. खुसरो के साहित्यिक अवदान पर प्रकाश डालिए ।
4. 'रामभक्ति शाखा' से आप क्या समझते हैं? रामभक्ति शाखा की विशेषताओं पर प्रकाश डालिए ।
5. रीतिमुक्त काव्यधारा की विशेषताओं का परिचय दीजिए ।
6. द्विवेदी युग की सामान्य प्रवृत्तियों पर प्रकाश डालिए ।
7. छायावाद में निराला का स्थान निर्धारित कीजिए ।
8. हिन्दी कहानी के उद्भव एवं विकास पर संक्षिप्त आलेख लिखिए ।
9. नाटक की परिभाषा देते हुए उसके प्रमुख तत्वों पर प्रकाश डालिए ।
10. संक्षिप्त टिप्पणी लिखिए:
(क) भारतेन्दु
(ख) प्रेमचंद
(ग) अज्ञेय

Nalanda Open University
Annual Examination - 2011
B.A. Hindi (Honours), Part-III
Paper-VI (काव्यशास्त्र एवं आलोचना)

Time: 3.00 Hrs.

Full Marks: 80/70

किन्हीं पाँच प्रश्नों के उत्तर दीजिये । सभी प्रश्नों के अंक समान हैं ।

1. साधारणीकरण की प्रक्रिया को स्पष्ट कीजिये ।
2. शब्दालंकार किसे कहते हैं? उसके भेदों की चर्चा कीजिये ।
3. अभिधा, लक्षणा एवं व्यंजना शब्द-शक्तियों में अन्तर बताइये ।
4. महाकाव्य एवं खंडकाव्य सम्बन्धी मान्यताओं को प्रस्तुत कीजिये ।
5. मूल्य सिद्धांत की समीक्षा कीजिये ।
6. “प्राणहीन आवृत्ति से नवीनता कहीं अच्छी है ।” - इलियट के परम्परा बोध के संदर्भ में इस उक्ति की समीक्षा कीजिये ।
7. काव्यभाषा में “चयन” से क्या समझते हैं? संक्षेप में उत्तर दीजिये ।
8. भारतीय आलोचना पद्धति का संक्षेप में विश्लेषण कीजिये ।
9. बाजपेयी जी के समीक्षा-सिद्धांतों की विवेचना कीजिये ।
10. आचार्य रामचन्द्र शुक्ल के आलोचना सम्बन्धी दृष्टिकोणों की व्याख्या कीजिये ।

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Nalanda Open University
Annual Examination - 2011
B.A. Hindi (Honours), Part-III
Paper-VII (भाषा विज्ञान तथा हिन्दी भाषा का इतिहास)

Time: 3.00 Hrs.

Full Marks: 80/70

कुल पाँच प्रश्नों का उत्तर लिखिए जिनमें खंड-क से तीन एवं खंड-ख और खंड-ग से एक-एक प्रश्न का उत्तर देना अनिवार्य है। सभी प्रश्न के अंक समान हैं।

खंड-क

1. भाषा की उत्पत्ति के सम्बन्ध में अबतक जितने मत या वाद प्रचलित हैं, उनमें आप क्या मान्य समझते हैं और क्यों?
2. भाषा के स्वरूप पर विस्तार से चर्चा कीजिये।
3. भाषा विज्ञान की गौण शाखाओं को रेखांकित कीजिये।
4. टिप्पणी लिखिए :
श्रुति, प्रयत्न, स्थान तथा बलाघात
5. वाक्य में स्वराघात तथा पद-लोप के स्वरूप को उद्घाटित कीजिये।
6. रूप परिवर्तन किसे कहते हैं? रूप-परिवर्तन के कारणों को सारणीबद्ध कीजिये।

खंड-ख

7. "हिन्दी के विकास में क्षेत्रीय बोलियों का योगदान" विषय पर एक नीतिदीर्घ आलेख लिखिए।
8. रचनात्मक भाषा किसे कहते हैं? उसकी क्या-क्या विशेषताएँ हैं?

खंड-ग

9. देवनागरी लिपि के विकास का संक्षिप्त रेखांकन प्रस्तुत कीजिये।
10. देवनागरी लिपि की विशेषताओं का उल्लेख कीजिये।

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Nalanda Open University
Annual Examination - 2011
B.A. Hindi (Honours), Part-III
Paper-VIII [प्रयोजनमूलक (व्यावहारिक) हिन्दी]

Time: 3.00 Hrs.

Full Marks: 80/70

किन्हीं पाँच प्रश्नों के उत्तर दीजिये । सभी प्रश्नों के अंक समान हैं ।

1. प्रयोजनमूलक हिन्दी के विविध स्वरूपों का विवेचन कीजिये ।
2. प्रथम राजभाषा अधिनियम की महत्त्वपूर्ण व्यवस्थाएँ क्या हैं?
3. बिहार में विधायिका तथा न्यायपालिका में राजभाषा हिन्दी के प्रयोग की अद्यतन स्थिति का विवेचन कीजिये ।
4. विधेयक क्या है? इसके प्रमुख अंगों का परिचय दीजिये ।
5. निम्नलिखित दस्तावेज का प्रारूप प्रस्तुत कीजिये :-
विक्रय-पत्र (सेल डीड), इच्छा-पत्र (वसीयत), हस्त-पत्र (हैंडनोट)
6. अनुशासनहीनता के लिए किसी कर्मचारी से स्पष्टीकरण पूछना है । स्पष्टीकरण पूछे जाने वाले ज्ञाप का प्रारूप दीजिये ।
7. राजपत्रित पदाधिकारी के रूप में अपने विभागाध्यक्ष को एक टिप्पणी प्रस्तुत करें जिसमें कार्यालयों में कार्यों के सत्वर और सम्यक् सम्पादन के लिए सुझाव दिया गया हो ।
8. अनुवाद की प्रक्रिया पर प्रकाश डालिये ।
9. निम्नलिखित अंग्रेजी शब्दों का हिन्दी पर्याय लिखिये :-

(i) Labour	(ii) Land-ceiling	(iii) List
(iv) Loan	(v) Lock-up	(vi) Plan
(vii) Pass	(viii) Power	(ix) Media
(x) Minimum	(xi) Pension	(xii) Net
(xiii) Nominee	(xiv) Nation	(xv) Note
(xvi) High Court		
10. निम्नलिखित अवतरण का हिन्दी अनुवाद कीजिये :-

There are a lot of divine virtues in this world and truthfulness is perhaps, the greatest divine virtue. Strict adherence to truth and truthfulness elevates a man to the height of divinity and enables him to reach the white throne of God. Saints and saged have spoken very highly of this great divine virtue which raises a man from the region of degeneration and glom to the height of godliness. The value of truthfulness is greater than riches and wordly possession. Its fragrance is sweetest.

Nalanda Open University
Annual Examination - 2011
B.A. History (Honours), Part-III
Paper-V (History of India 1757-1950)

Time: 3.00 Hrs.

Full Marks: 80/70

Answer any *Five* Questions. All questions carry equal marks.
 किन्हीं पाँच प्रश्नों के उत्तर लिखिए । सभी प्रश्नों के अंक समान हैं ।

1. "The battle of Buxar was more conclusive than the battle of Plassey". How far do you agree with this statement?
 "बक्सर का युद्ध प्लासी के युद्ध की तुलना में अधिक निर्णायक था" । इस कथन से आप कहाँ तक सहमत हैं ।
2. Delineate the causes and consequences of the first Anglo-Maratha War.
 प्रथम आंग्ल-मराठा युद्ध के कारणों और परिणामों की विवेचना कीजिये ।
3. Review the circumstances leading to the annexation of Sindh.
 सिंध के अधिग्रहण की परिस्थितियों का पुनरावलोकन कीजिये ।
4. Write an essay on Anglo-Nepal relation.
 आंग्ल-नेपाल सम्बन्ध पर एक निबन्ध लिखिये ।
5. Examine the various reforms introduced by Lord William Bentick.
 लॉर्ड विलियम बेंटिक के विभिन्न सुधारों का परीक्षण कीजिये ।
6. Analyse the causes of failure of the revolt of 1857 and its effects.
 1857 ई० के विद्रोह की असफलता के कारणों एवं परिणामों का विश्लेषण कीजिये ।
7. Give an estimate of the works of Lord Curzon.
 लॉर्ड कर्जन के कार्यों का विवरण दीजिये ।
8. What do you understand by the word "Dyarchy"? How did it work under the Government of India Act of 1919?
 द्वैध शासन से क्या समझते हैं । इसका संचालन 1919ई० के भारत सरकार अधिनियम के अन्तर्गत किस प्रकार हुआ?
9. Give an account of the contributions of Dayanand Saraswati and Arya Samaj.
 दयानन्द सरस्वती और आर्य समाज के योगदानों का विवरण दीजिये ।
10. Write short notes on any two of the following:
 निम्नलिखित में किन्हीं दो पर टिप्पणी लिखिये :-
 - (a) Advent of European Trading Companies in India.
 भारत में यूरोपीय व्यापारिक कम्पनियों का आगमन
 - (b) Ranjeet Singh
 रणजीत सिंह
 - (c) Theosophical Society
 थियोसोफिकल सोसाइटी
 - (d) Act of 1935.
 1935 ई० का अधिनियम

Nalanda Open University
Annual Examination - 2011
B.A. History (Honours), Part-III
Paper-V (History of India 1757 A.D.-1950 A.D.)

Time: 3.00 Hrs.

Full Marks: 80/70

Answer any *Five* Questions. All questions carry equal marks.
किन्हीं पाँच प्रश्नों के उत्तर लिखिए । सभी प्रश्नों के अंक समान हैं ।

1. Account for the Anglo-French rivalry in India.
भारत में आंग्ल-फ्रांसिसी संघर्ष का विवरण दीजिये ।
2. Analyse the life and achievements of Hyder Ali.
हैदर अली की जीवनी एवं उपलब्धियों का विश्लेषण कीजिये ।
3. Describe the achievements of Ranjeet Singh.
रणजीत सिंह की उपलब्धियों का वर्णन कीजिये ।
4. Briefly discuss the Anglo-Burmese relations during the 19th century.
19वीं शताब्दी में आंग्ल-बर्मा सम्बन्धों की संक्षिप्त समीक्षा करें ।
5. Give an account of the reforms of Warren Hastings.
वारेन हेस्टिंग्स के सुधारों का वर्णन कीजिये ।
6. Examine the causes and consequences of the Revolt of 1857.
1857ई0 के विद्रोह के कारणों एवं परिणामों का परीक्षण कीजिये ।
7. Review the domestic policy of Lord Curzon.
लॉर्ड कर्जन की गृह नीति की समीक्षा कीजिये ।
8. Delineate the main features of the constitution of India.
भारतीय संविधान की प्रमुख विशेषताओं को रेखांकित कीजिये ।
9. Throw light on the development of Modern Education in India from 1854 to 1904.
1854 ई0 से 1904 ई0 तक भारत में आधुनिक शिक्षा के विकास पर प्रकाश डालिये ।
10. Write short notes on any two of the following:
निम्नलिखित में किन्हीं दो पर टिप्पणी लिखिये :-
 - (a) Annexation of Sindh
सिंध विलय
 - (b) Act of 1935
1935 ई0 का अधिनियम
 - (c) Lord Lytton
लॉर्ड लिटन

Nalanda Open University
Annual Examination - 2011
B.A. History (Honours), Part-III
Paper-VI [History of Freedom Movement of India (1857-1950)]

Time: 3.00 Hrs.

Full Marks: 80/70

Answer any *Five* Questions. All questions carry equal marks.
किन्हीं पाँच प्रश्नों के उत्तर लिखिए । सभी प्रश्नों के अंक समान हैं ।

1. भारतीय राष्ट्रीय कांग्रेस की स्थापना और उसकी स्थापना से सम्बन्धित विभिन्न विचारों का वर्णन कीजिये ।
Describe establishment of Indian National Congress and various theories regarding its establishment.
2. भारतीय राष्ट्रीय आंदोलन में उग्रवादियों के उद्देश्य कार्य पद्धति एवं उपलब्धियों को रेखांकित कीजिये ।
Trace out the aims, methods and achievements of The Extremists in the National Movement of India.
3. भारतीय राजनीति में क्रांतिकारी राष्ट्रवादी आंदोलन के उदय के कारण एवं 1906 ई० से 1916 ई० तक उनके कार्य प्रणाली पर प्रकाश डालिये ।
Throw light on the causes of The Rise of Revolutionary Nationalist Movement in Indian Politics and their methods form 1906 to 1916.
4. होम रूल आंदोलन में तिलक एवं एनी बेसेन्ट के योगदानों का मूल्यांकन कीजिये ।
Give an evaluation of the contributions of Tilak and Annie Besant in Home Rule Movement.
5. भारतीय राजनीति में गाँधी जी के प्रवेश का वर्णन कीजिये ।
Discuss the emergence of Gandhiji in Indian Politics.
6. सविनय अवज्ञा आंदोलन के कारणों एवं महत्व का विश्लेषण कीजिये ।
Analyse the causes and significance of Civil Disobedience Movement in India.
7. 1930 ई० में 1947 ई० के मध्य मुस्लिम लीग की मुस्लिम राजनीति पर निबन्ध लिखिये ।
Write an essay on Muslim Politics between 1930 to 1947 by Muslim League.
8. आजाद हिंद फौज के गठन एवं उसकी भूमिका की व्याख्या कीजिये ।
Explain the formation of Indian National Army and its functions.
9. कैबिनेट मिशन के महत्व का वर्णन कीजिये ।
Discuss the importance of Cabinet Mission.
10. निम्नलिखित में किन्हीं दो पर टिप्पणी लिखिये :-
Write any two short notes of the following:-
 - (a) बाल गंगाधर तिलक
Bal Gangadhar Tilak
 - (b) स्वराज दल
Swaraj Party
 - (c) क्रिप्स योजना
Cripp's Plan
 - (d) मुस्लिम लीग
Muslim League

Nalanda Open University
Annual Examination - 2011
B.A. History (Honours), Part-III
Paper-VI [History of Freedom Movement of India (1857-1950)]

Time: 3.00 Hrs.

Full Marks: 80/70

Answer any *Five* Questions. All questions carry equal marks.
किन्हीं पाँच प्रश्नों के उत्तर लिखिए । सभी प्रश्नों के अंक समान हैं ।

1. भारतीय राष्ट्रीय काँग्रेस की स्थापना में सहायक उन राजनीतिक संगठनों की स्थापना का वर्णन कीजिए जो 1885 ई0 में भारतीय राष्ट्रीय काँग्रेस की स्थापना में सहायक सिद्ध हुए।
Discuss the establishment of different political organizations which proved helpful in the establishment of Indian National Congress in 1885.
2. भारत के स्वतन्त्रता संग्राम में उग्रवादियों की भूमिका की विवेचना कीजिये ।
Discuss the role of extremists in the freedom struggle of India.
3. 1905 ई0 में बंगाल विभाजन के कारणों और परिणामों को रेखांकित कीजिये ।
Trace the causes and consequences of The Partition of Bengal in 1905.
4. भारतीय राष्ट्रीय आंदोलन में महात्मा गाँधी की भूमिका की समीक्षा कीजिये ।
Assess the role of Mahatma Gandhi in The National Movement of India.
5. सविनय अवज्ञा आंदोलन के कारणों एवं परिणामों की समीक्षा कीजिये ।
Review the causes and consequences of The Civil Disobedience Movement.
6. 1942 ई0 के भारत छोड़ो आंदोलन का आलोचनात्मक विवरण दीजिये ।
Give an critical account of The Quit India Movement of 1942.
7. भारत में समाजवादी आंदोलन की उत्पत्ति के कारण एवं महत्व पर प्रकाश डालिये ।
Throw light on the causes of the genesis of Socialist Movement in India and its significance.
8. क्रिप्स मिशन पर एक निबंध लिखिये ।
Write an essay on Cripp's Mission.
9. भारत विभाजन के कारणों का विश्लेषण कीजिये ।
Analyse the causes of the Partition of India.
10. निम्नलिखित में किन्हीं दो पर टिप्पणी लिखिये :-
Write any two short notes of the following:-
 - (a) असहयोग आंदोलन
Non-Cooperation Movement
 - (b) मुस्लिम लीग की स्थापना
Establishment of Muslim League
 - (c) कैबिनेट मिशन
Cabinet Mission
 - (d) भारत-स्वतन्त्रता के कारण
Causes of the Independence of India.

Nalanda Open University
Annual Examination - 2011
B.A. History (Honours), Part-III
Paper-VII [Brief History of Asia]

Time: 3.00 Hrs.

Full Marks: 80/70

Answer any *Five* Questions, Selecting at least two question from each group "A" and "B". All questions carry equal marks.

प्रत्येक खंड “अ” एवं “ब” से कम से कम दो प्रश्नों का चयन करते हुए, किन्हीं पाँच प्रश्नों के उत्तर लिखिए। सभी प्रश्नों के अंक समान हैं।

खंड-“अ” Group "A"

1. हजरत मोहम्मद की जीवनी एवं उपदेशों का विवरण दें।
Give an account of the life and teachings of Prophet Mohammad.
2. अब्बासी काल को स्वर्णकाल क्यों कहा जाता है? व्याख्या करें।
Why is Abbasids period is known as "Golden Period"? Explain.
3. सऊदी अरेबिया के आधुनिकीकरण में इब्न सऊद की भूमिका का परीक्षण कीजिये।
Examine the role of Ibn Saud in the modernization of Saudi Arabia.
4. पश्चिमी एशिया में इंग्लैण्ड तथा फ्राँस की संरक्षण की नीतियों का मूल्यांकन कीजिये।
Evaluate the Mandatory system of England and France in western Asia.
5. उन्नीसवीं शताब्दी में चीन ब्रिटेन के सम्बन्धों की समीक्षा कीजिये।
Review the relations between China and Britain during 19th century.
6. जापान के द्वार-भेदन के कारणों और परिणामों का वर्णन करें।
Describe the causes and consequences of the opening of Japan doors of Japan.

खंड-“ब” Group "B"

7. सुवर्णद्वीप में भारतीय उपनिवेशों की स्थापना एवं विस्तार को रेखांकित कीजिये।
Trace the establishment and expansion of Indian colonies in Suvarn-Dvip.
8. प्राचीन कम्बोडिया के समाज, धर्म एवं संस्कृति पर एक निबंध लिखिये।
Write an essay on society, Religion and culture of ancient Cambodia.
9. इंडोनेशिया पर डच प्रभुत्व की स्थापना का विवरण दें।
Account for the Dutch supremacy on Indonesia.
10. बर्मा के राष्ट्रीय आंदोलन पर प्रकाश डालिये।
Throw light on the national movement of Burma.

Nalanda Open University
Annual Examination - 2011
B.A. History (Honours), Part-III
Paper-VII [Brief History of Asia]

Time: 3.00 Hrs.

Full Marks: 80/70

Answer any *Five* Questions, Selecting at least two question from each group "A" and "B". All questions carry equal marks.

प्रत्येक खंड “अ” एवं “ब” से कम से कम दो प्रश्नों का चयन करते हुए, किन्हीं पाँच प्रश्नों के उत्तर लिखिए । सभी प्रश्नों के अंक समान हैं ।

खंड-“अ” Group "A"

1. इस्लाम की शिक्षाओं तथा सिद्धांत एवं अरब प्रायद्वीप में इस्लाम के प्रसार में पैगम्बर मोहम्मद की भूमिका का वर्णन कीजिये ।
Elucidate the teachings and principles of Islam and role of prophet Mohammad in the spread of Islam in Arabian Peninsula.
2. अरबों के सांस्कृतिक प्रगति में अब्बासियों के योगदानों परीक्षण कीजिए ।
Examine the contributions of Abbasids in the development of culture of Arab.
3. रज़ा शाह पहलवी की उपलब्धियों का मूल्यांकन कीजिये ।
Assess the achievements of Razashah Paharvi.
4. दो विश्व युद्ध के मध्य अरब राष्ट्रवाद की प्रगति पर प्रकाश डालिए ।
Throw light on the development of Arab-Nationalism between two world-Wars.
5. जापान के आधुनिकीकरण के कारणों और परिणामों की व्याख्या कीजिये ।
Explain the causes and effects of the modernization of Japan.
6. चीन में लोक गणराज्य सरकार की स्थापना का विवरण प्रस्तुत करें ।
Give an account of the establishment of the Republic Government in China.

खंड-“ब” Group "B"

7. जावा में विभिन्न हिन्दू-राजवंशों के राजनीतिक इतिहास की विवेचना कीजिये ।
Analyse the political History of different Hindu dynasties in Java.
8. प्राचीन कम्बोडिया के सामाजिक, आर्थिक एवं सांस्कृतिक जीवन का परीक्षण कीजिए ।
Examine the social, economic and cultural life of ancient Cambodia.
9. इंडोनेशिया के राष्ट्रीय आन्दोलन के विभिन्न पहलुओं का वर्णन कीजिए ।
Describe different aspects of Indonesian National Movement.
10. अमेरिकी-वियतनाम संघर्ष को इंगित कीजिये । इसके महत्व पर प्रकाश डालिये ।
Point out the American-Vietnamese War. Throw light on its importance.

A

Nalanda Open University
Annual Examination - 2011
B.A. History (Honours), Part-III
Paper-VIII [History of U.S.A. 1776-1945]

Time: 3.00 Hrs.

Full Marks: 80/70

Answer any *Five* Questions. All questions carry equal marks.
किन्हीं पाँच प्रश्नों के उत्तर लिखिए । सभी प्रश्नों के अंक समान हैं ।

1. जॉर्ज वाशिंगटन की जिवनी एवं उपलब्धियों का मूल्यांकन कीजिये ।
Assess the career and achievements of George Washington.
2. संयुक्त राज्य अमेरिका के लोकतन्त्र पद्धति के विकास में राष्ट्रपति जैक्सन के योगदानों का वर्णन कीजिये ।
Describe the contributions of President Jackson in the development of democratic system in U.S.A.
3. अमेरिका के राष्ट्रपति के रूप में अब्राहम लिंकन की भूमिका का आकलन कीजिए ।
Assess the role of Abraham Lincoln as the president of America.
4. पोपुलिस्ट आंदोलन के स्वरूप और महत्व पर प्रकाश डालिये ।
Throw light on the nature and significance of Populist Movement.
5. थियोडोर रूजवेल्ट की जीवनी एवं उपलब्धियों का मूल्यांकन कीजिए ।
Give an evaluation of the life and achievements of Theodore Rousevelt.
6. विश्व शक्ति के रूप में संयुक्त राज्य अमेरिका के उदय के कारणों का परीक्षण कीजिए ।
Examine the causes of the emergence of U.S.A as World power.
7. 1914 ई0 तक संयुक्त राज्य अमेरिका की विदेश नीति का वर्णन कीजिये ।
Discuss the foreign policy of United States of America till 1914.
8. 1929 ई0 की आर्थिक मंदी पर निबंध लिखिये ।
Write an essay on the Economic Depression of 1929.
9. द्वितीय विश्व-युद्ध अमेरिका के प्रवेश के कारणों तथा इसके परिणामों का विश्लेषण कीजिए ।
Analyse the causes and consequences of the America's entry into the Second World War.
10. निम्नलिखित में किन्हीं दो पर लघु टिप्पणी लिखें ।
Write any two short notes of the following:
(A) अमेरिकी क्राँति के कारण: Causes of the American Revolution.
(B) अमेरिकी संविधान का महत्व: Significance of the American constitution.
(C) अमेरिका की दास प्रथा: Slavery system in America.
(D) नागरिक अधिकार आंदोलन: Civil Right Movement.

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Nalanda Open University
Annual Examination - 2011
B.A. History (Honours), Part-III
Paper-VIII [History of U.S.A. 1776-1945]

Time: 3.00 Hrs.

Full Marks: 80/70

Answer any *Five* Questions. All questions carry equal marks.
किन्हीं पाँच प्रश्नों के उत्तर लिखिए । सभी प्रश्नों के अंक समान हैं ।

1. अमेरिकन स्वतन्त्रता संग्राम के कारणों और परिणामों का परीक्षण कीजिये ।
Examine the causes and effects of the war of American Independence.
2. अमेरिकन संविधान की मुख्य विशेषताओं का वर्णन कीजिये ।
Discuss the salient features of American Constitution.
3. जॉर्ज वाशिंगटन के सुधारों का वर्णन कीजिये ।
Describe the reforms of George Washington.
4. जैक्सन के प्रजातन्त्र की विशेषताओं का विवरण दें ।
Account for the factors of Jacksonian Democracy.
5. अमेरिकी दास समस्या से आप क्या समझते हैं? इस समस्या के समाधान पर एक निबन्ध लिखिये ।
What do you understand by American slave problem? Write an essay on the solution of this problem.
6. थियोडोर रूजवेल्ट की जीवनी एवं उपलब्धियों का विवरण प्रस्तुत करें ।
Give an account of the life and achievements of Theodore Rousevelt.
7. स्पेनिश-अमेरिकन युद्ध के कारणों एवं परिणामों का परीक्षण कीजिये ।
Examine the causes and consequences of the Spanish-American War.
8. राष्ट्रपति विल्सन के चौदह-सूत्री कार्यक्रम की व्याख्या कीजिये ।
Explain the Fourteen-point programme of President Wilson.
9. द्वितीय विश्व युद्ध में अमेरिका की भूमिका का वर्णन कीजिये ।
Discuss the role of U.S.A. in the Second World War.
10. निम्नलिखित में किन्हीं दो पर लघु टिप्पणी लिखें ।
Write short notes on any two of the following:

(A) हेमिल्टन की वित्तीय नीति:	Economic Policy of Hamilton.
(B) अमेरिकी गृह-युद्ध	Civil-war of America.
(C) अमेरिका की औद्योगिक प्रगति	Industrial Development of U.S.A.
(D) पोपुलिस्ट आंदोलन	Populist Movement.

Nalanda Open University
Annual Examination - 2011
B.A. Political Science (Honours), Part-III
Paper-V (Public Administration)

Time: 3.00 Hrs.

Full Marks: 80/70

Answer any *Five* Questions. All questions carry equal marks.
किन्हीं पाँच प्रश्नों के उत्तर लिखिए । सभी प्रश्नों के अंक समान हैं ।

1. Discuss the role of Public Administration in a developing country like India.
भारत जैसे विकासशील देश में लोक-प्रशासन की विवेचना कीजिये ।
2. Discuss the Behavioral Approach to the study of Public Administration.
लोक प्रशासन के अध्ययन के व्यवहारवादी उपागम की विवेचना कीजिये ।
3. Discuss the Human Relation theory of organization.
संगठन के मानव संबंध सिद्धांत की विवेचना कीजिये ।
4. Discuss Max Weber's theory of Bureaucracy.
मैक्स वेबर के नौकरशाही सिद्धांत की विवेचना कीजिये ।
5. Explain the thought of Herbert Simon on Decision Making.
निर्णय निर्माण पर हरबर्ट साइमां के विचारों की व्याख्या कीजिये ।
6. Discuss different types of communication.
संचार के विभिन्न प्रकारों की विवेचना कीजिये ।
7. What is training? What are their main objectives? Discuss.
प्रशिक्षण क्या है? इसके प्रमुख उद्देश्य क्या हैं? विवेचना कीजिये ।
8. Discuss the methods of recruitment in civil services.
लोक सेवाओं में भर्ती की विभिन्न पद्धतियों की विवेचना कीजिये ।
9. Discuss the various stages of Budget making in India.
भारत में बजट निर्माण के विभिन्न चरणों का वर्णन कीजिये ।
10. What is Administrative Adjudication? Discuss its merits and demerits.
प्रशासकीय अधिनिर्णय क्या है? इसके गुण-दोषों का विवेचन कीजिये ।

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Nalanda Open University
Annual Examination - 2011
B.A. Political Science (Honours), Part-III
Paper-VI (Political thought)

Time: 3.00 Hrs.

Full Marks: 80/70

Answer any *Five* Questions. All questions carry equal marks.
किन्हीं पाँच प्रश्नों के उत्तर लिखिए । सभी प्रश्नों के अंक समान हैं ।

1. Explain Kautilya's views on kingship.
राजतंत्र पर कौटिल्य के विचारों की व्याख्या कीजिए ।
2. Write an essay on Kautilya's Council of Ministers.
कौटिल्य के मंत्रीपरिषद पर एक निबंध लिखिए ।
3. Critically examine Plato's theory of Education.
प्लेटो के शिक्षा सिद्धांत का आलोचनात्मक परीक्षण कीजिए ।
4. Discuss Plato's concept of Philosopher king.
प्लेटो के दार्शनिक शासक की अवधारणा की विवेचना कीजिए ।
5. Discuss Aristotle's theory of Citizenship.
अरस्तु के नागरिकता संबंधी सिद्धांत की विवेचना कीजिए ।
6. Examine Aristotle's concept of Slavery.
अरस्तु की दासता संबंधी अवधारणा का परीक्षण कीजिए ।
7. Discuss the individualistic elements in Hobbes' political thought.
हॉब्स के राजनीतिक चिंतन में व्यक्तिवादी तत्त्वों की विवेचना कीजिए ।
8. Why is Locke regarded as the founder of Liberalism?
लॉक को उदारवाद का संस्थापक क्यों कहा जाता है?
9. Examine individualist and socialist elements in Rousseau's political philosophy.
रूसो के राजदर्शन में व्यक्तिवादी तथा समाजवादी तत्त्वों का परीक्षण कीजिए ।
10. Discuss J.S. Mill's theory of Liberty.
जे० एस० मिल के स्वतंत्रता संबंधी विचारों की विवेचना कीजिए ।

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Nalanda Open University
Annual Examination - 2011
B.A. Political Science (Honours), Part-III
Paper-VII (Political Sociology)

Time: 3.00 Hrs.

Full Marks: 80/70

Answer any *Five* Questions. All questions carry equal marks.
किन्हीं पाँच प्रश्नों के उत्तर लिखिए । सभी प्रश्नों के अंक समान हैं ।

1. Define Political Sociology and describe its scope.
राजनीतिक समाजशास्त्र को परिभाषित कीजिए तथा इसके क्षेत्र का वर्णन कीजिए ।
2. Write an essay on Political Elite.
राजनीतिक अभिजन पर एक निबंध लिखिए ।
3. Define Political Culture and discuss its different dimensions.
राजनीतिक संस्कृति को परिभाषित कीजिए तथा इसके विभिन्न आयामों का विवेचन कीजिए ।
4. Describe the nature and importance of Political Modernization.
राजनीति आधुनिकीकरण की प्रकृति तथा महत्त्व का वर्णन कीजिए ।
5. Describe the main stages of Political Development.
राजनीति विकास के विकास की प्रमुख अवस्थाओं का वर्णन कीजिए ।
6. Define Political Socialization and describe various agencies of Political Socialization.
राजनीतिक सामाजिकरण को परिभाषित कीजिए तथा इसके विभिन्न अभिकरणों का वर्णन कीजिए ।
7. What is the meaning of Political Recruitment? Describe methods of Political Recruitment.
राजनीतिक भर्ती का क्या अर्थ है? राजनीतिक भर्ती के तरीकों का वर्णन कीजिए ।
8. Describe the meaning and importance of Political Communication.
राजनीतिक संचार के अर्थ एवं महत्त्व का वर्णन कीजिए ।
9. Discuss the social bases of Indian Politics.
भारतीय राजनीति के सामाजिक आधारों की विवेचना कीजिए ।
10. Explain the characteristics of Bureaucracy.
नौकरशाही की विशेषताओं की व्याख्या कीजिए ।

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: सिर्फ 8वें पत्र की परीक्षा की तिथि में परिवर्तन की सूचना :

नालन्दा खुला विश्वविद्यालय का षष्ठम दीक्षान्त समारोह, दिनांक-21.02.2011 को निर्धारित है, इसलिए आपके सिर्फ 8वें पत्र की परीक्षा अब दिनांक-22.02.2011 को 03.30 बजे से 06.30 बजे तक सम्पन्न होगी । सिर्फ आठवे पत्र की परीक्षा की तिथि एवं समय में परिवर्तन किया गया है । शेष परीक्षा पूर्व निर्धारित कार्यक्रम के अनुरूप होंगी ।

Nalanda Open University
Annual Examination - 2011
B.A. Political Science (Honours), Part-III
Paper-VIII (Indian Political Thought)

Time: 3.00 Hrs.

Full Marks: 80/70

Answer any *Five* Questions. All questions carry equal marks.
किन्हीं पाँच प्रश्नों के उत्तर लिखिए । सभी प्रश्नों के अंक समान हैं ।

1. Discuss Kautilya's 'Mandal' theory.
कौटिल्य के 'मंडल' सिद्धांत की विवेचना कीजिए ।
2. Discuss Tilak's ideas on 'Swaraj'.
'स्वराज' पर तिलक के विचारों का विवेचन कीजिए ।
3. Describe political ideas of Swami Vivekanand.
स्वामी विवेकानन्द के राजनीतिक विचारों का वर्णन कीजिए ।
4. Explain M.N.Roy's ideas on new Humanism.
नवीन मानवतावाद संबंधी एम० एन० राय के विचारों की व्याख्या कीजिए ।
5. Why is Raja Ram Mohan Roy regarded as the 'Father of Modern India'?
राजा राम मोहन राय को 'आधुनिक भारत का जनक' क्यों कहा जाता है?
6. Examine Raja Ram Mohan Ray's religious, social, economic and political ideas.
राजा राम मोहन राय के धार्मिक, सामाजिक, आर्थिक तथा राजनीतिक विचारों का परीक्षण कीजिए ।
7. Describe social and political ideas of Mahatma Gandhi.
महात्मा गाँधी के सामाजिक तथा राजनीतिक विचारों का वर्णन कीजिए ।
8. Examine Jawaharlal Nehru's contributions to Indian political thought.
भारतीय राजनीतिक चिंतन के प्रति जवाहरलाल नेहरू के योगदानों का परीक्षण कीजिए ।
9. Discuss Lohia's contributions to Indian political thought.
भारतीय राजनीतिक चिंतन के प्रति लोहिया के योगदानों का परीक्षण कीजिए ।
10. Examine 'Six-Fold Policy' of Kautilya.
कौटिल्य के षड्गुण सिद्धांत का परीक्षण कीजिए ।

Nalanda Open University
Annual Examination - 2011
B.A. Psychology (Honours), Part-III
Paper-V

Time: 3.00 Hrs.

Full Marks: 80/70

Answer any *Five* Questions. All questions carry equal marks.
किन्हीं पाँच प्रश्नों के उत्तर लिखिए । सभी प्रश्नों के अंक समान हैं ।

1. What do you mean by Psychological Research? Discuss its Characteristics.
मनोवैज्ञानिक शोध से आप क्या समझते हैं? इसके विशेषताओं का वर्णन करें ।
2. What is data analysis? Explain its various operations.
प्रदत्त विश्लेषण क्या है? इसके विभिन्न संकायों की व्याख्या कीजिए ।
3. Distinguish between research problem and research hypothesis.
शोध समस्या एवं शोध परिकल्पना में विभेद कीजिए ।
4. What do you mean by variable? Distinguished between quantitative variables and qualitative variables.
चर से आप क्या समझते हैं? मात्रात्मक चर एवं गुणात्मक चर में अन्तर करें ।
5. Discuss the nature and characteristics of corelational research design.
सह सम्बन्ध शोध अभिकलन की प्रकृति एवं विशेषताओं की विवेचना कीजिये ।
6. Discuss the nature and types of observation as tools of data collection.
प्रदत्त संग्रह के उपकरण के रूप में निरीक्षण की प्रकृति एवं प्रकारों की विवेचना करें ।
7. Write an essay on techniques of Sampling.
प्रतिचयन की तकनीक पर एक निबंध लिखें ।
8. Explain the concept of psychological Test. Describe with main types.
मनोवैज्ञानिक परीक्षण की अवधारणा स्पष्ट कीजिए । इसके प्रमुख भेदों का वर्णन करें ।
9. What is survey research? Discuss types of Survey research.
सर्वेक्षण शोध क्या है? सर्वेक्षण शोध के प्रकारों की विवेचना कीजिए ।
10. Write short notes on any **Two** of the following:
किन्हीं दो पर संक्षिप्त टिप्पणियाँ लिखिए :
 - (a) Sources for locating research problem
शोध समस्या के निर्धारण के स्रोत
 - (b) Dependent variables
आश्रित चर
 - (c) Quota Sampling
अंश प्रतिचयन

Nalanda Open University
Annual Examination - 2011
B.A. Psychology (Honours), Part-III
Paper-VI

Time: 3.00 Hrs.

Full Marks: 80/70

Answer any *Five* Questions. All questions carry equal marks.
किन्हीं पाँच प्रश्नों के उत्तर लिखिए । सभी प्रश्नों के अंक समान हैं ।

1. Discuss the relation between clinical psychology and counseling psychology.
नैदानिक मनोविज्ञान एवं परामर्श मनोविज्ञान में सम्बन्धों का वर्णन करें ।
2. Discuss the role of clinical psychologists in clinics.
उपचार गृहों में नैदानिक चिकित्सकों की भूमिका का वर्णन करें ।
3. Discuss the critical appraisal of psychodynamic model and behavioural mode.
मनोगत्यात्मक एवं व्यवहारात्मक मॉडलों का आलोचनात्मक मूल्यांकन करें ।
4. Distinguish between structured and unstructured interview.
संरचित तथा असंरचित साक्षात्कार साक्षात्कार में अन्तर करें ।
5. Describe the merit and demerits of Thematic Apperception Test (TAT)
विषय आत्मबोध परीक्षण के गुण तथा दोषों की व्याख्या करें ।
6. Discuss the psychoanalytical treatment method of freud.
फ्रायड का मनोविश्लेषणात्मक उपचार विधि का वर्णन करें ।
7. Discuss the Joseph Wolpe's method of systematic desensitization.
जोसेफ होलपे के क्रमबद्ध असंवेदीकरण विधि वर्णन करें ।
8. Describe the merit and demerit of Rational Emotive theory.
रेशनल इमोटिव चिकित्सा के गुण तथा दोषों की व्याख्या करें ।
9. Write an essay on Humanistic existential therapies.
मानवतावादी अनुभावात्मक चिकित्सा पर एक निबंध लिखें ।
10. Discuss the merit and demerits of Group Therapy.
समूह चिकित्सा के गुण तथा दोषों का वर्णन करें ।

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Nalanda Open University
Annual Examination - 2011
B.A. Psychology (Honours), Part-III
Paper-VII

Time: 3.00 Hrs.

Full Marks: 80/70

Answer any *Five* Questions in all. Selecting atleast two questions from each Group.
कुल पाँच प्रश्नों के उत्तर लिखिए, प्रत्येक खंड से न्यूनतम दो प्रश्नों का चयन करें ।
सभी प्रश्नों के अंक समान हैं ।

"Group-A" (खण्ड-अ)

1. Discuss the role of psychologists in Industrial organization.
औद्योगिक संगठनों में मनोवैज्ञानिकों की भूमिका का वर्णन कीजिए ।
2. What is psychological Test? Discuss its different types.
मनोवैज्ञानिक परीक्षण क्या है? इसके विभिन्न प्रकारों का वर्णन कीजिए ।
3. Discuss the measures to prevent accident.
दुर्घटना रोकने के उपायों का वर्णन कीजिए ।
4. Discuss the nature and characteristics of Fatigue.
थकान के लक्षण एवं विशेषताओं का वर्णन कीजिए ।
5. Describe the principles of Time and Motion Study.
समय तथा गति अध्ययन के नियमों की व्याख्या कीजिए ।

"Group-B" (खण्ड-ब)

6. What re the different problems of Educational Psychology? Discuss.
शिक्षा मनोविज्ञान की कौन-कौन सी विभिन्न समस्याएँ हैं? वर्णन कीजिए ।
7. Discuss the role of Reward and Punishment in learning.
शिक्षण में पुरस्कार तथा दण्ड की भूमिका का वर्णन कीजिए ।
8. Discuss the Educational Implications of Transfer of Training.
शिक्षण स्थानान्तरण के शैक्षिक आशय का वर्णन कीजिए ।
9. What do you mean by Exceptional Children? Discuss the different types of exceptional children.
विशिष्ट बालकों से आप क्या समझते हैं? विशिष्ट बालकों के विभिन्न प्रकारों का वर्णन कीजिये ।
10. Discuss the functions of educational guidance.
शैक्षिक निर्देशन के कार्यों का वर्णन कीजिए ।

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स्नातक प्रतिष्ठा (मनोविज्ञान), पार्ट-III के प्रायोगिक परीक्षा 2011 का कार्यक्रम		
नालन्दा खुला विश्वविद्यालय के मनोविज्ञान प्रतिष्ठा, खण्ड-तृतीय के विद्यार्थियों के प्रायोगिक काउन्सेलिंग वर्ग तथा प्रयोगिक परीक्षा का कार्यक्रम निम्नवत् है :-		
तिथि	स्थान	समय
24.02.2011	पटना महाविद्यालय का मनोविज्ञान विभाग	2 बजे से 6 बजे काउन्सेलिंग वर्ग
25.02.2011	पटना महाविद्यालय का मनोविज्ञान विभाग	2 बजे से 6 बजे काउन्सेलिंग वर्ग
26.02.2011	पटना महाविद्यालय का मनोविज्ञान विभाग	2 बजे से 6 बजे प्रायोगिक परीक्षा

Nalanda Open University
Annual Examination - 2011
B.A. Sociology (Honours), Part-III
Paper-V

Time: 3.00 Hrs.

Full Marks: 80/70

Answer any *Five* Questions. All questions carry equal marks.
किन्हीं पाँच प्रश्नों के उत्तर लिखिए । सभी प्रश्नों के अंक समान हैं ।

1. Explain the concept of Social Problem. Elucidate the main causes of social problem?
सामाजिक समस्या की अवधारणा स्पष्ट करें । सामाजिक समस्याओं के प्रमुख कारणों का विश्लेषण करें ।
2. Explain the concept of poverty. Describe the causes of poverty in India.
गरीबी की अवधारणा को स्पष्ट करें । भारत में गरीबी के कारणों का उल्लेख करें ।
3. Discuss measures for the removal of problems of women in India.
भारत में स्त्रियों की समस्याओं को दूर करने के उपायों का विश्लेषण करें ।
4. What is caste-based conflict? Give your opinion on caste based conflict in India.
जातिगत संघर्ष क्या है? भारत में जातिगत संघर्ष पर अपने विचार प्रस्तुत करें ।
5. What is the custom of Dowry? Give its sociological analysis.
दहेज प्रथा क्या है? इसका समाजशास्त्रीय विश्लेषण करें ।
6. Discuss the historical trend of Regional disparity in India.
भारत में प्रादेशिक विषमता के ऐतिहासिक प्रवृत्ति की विवेचना करें ।
7. What do you understand by Inter-generation and intra-generation conflict? Discuss its causes.
अन्तर-पीढ़ी एवं अन्तः पीढ़ी संघर्ष से क्या समझते हैं? इसके कारणों की समीक्षा करें ।
8. What is white collar crime? Describe its characteristics.
श्वेतपोश अपराध क्या है? इसकी विशेषताओं का वर्णन करें ।
9. What are Natural Disasters and what are their types? Describe.
प्राकृतिक आपदाएं क्या हैं तथा ये कितनी प्रकार की होती हैं? वर्णन करें ।
10. Write notes on any two of the following:-
निम्नलिखित में से किन्हीं दो पर टिप्पणी लिखें :
 - (a) Problem of pollution
प्रदूषण की समस्या
 - (b) Corruption
भ्रष्टाचार
 - (c) Divorce
विवाह-विच्छेद (तलाक)
 - (d) Ethnic Diversity
नृजातीय असामंजस्य

Nalanda Open University
Annual Examination - 2011
B.A. Sociology (Honours), Part-III
Paper-VI (Rural & Urban Sociology)

Time: 3.00 Hrs.

Full Marks: 80/70

Answer any *Five* Questions. All questions carry equal marks.
किन्हीं पाँच प्रश्नों के उत्तर लिखिए । सभी प्रश्नों के अंक समान हैं ।

1. Discuss the definition, subject matter and scope of Rural Sociology.
ग्रामीण समाजशास्त्र की परिभाषा, विषयवस्तु एवं क्षेत्र का विवेचन करें ।
2. Discuss the approaches to the study of Rural and Urban Sociology.
ग्रामीण तथा नगरीय समाजशास्त्र के अध्ययन के उपागमों की विवेचना करें ।
3. What is Caste? Give a brief account of the theories of origin of Caste.
जाति क्या है? जाति की उत्पत्ति के सिद्धांतों का संक्षिप्त वर्णन दें ।
4. Discuss the scope of Urban Sociology.
नगरीय समाजशास्त्र के विषय क्षेत्र की विवेचना करें ।
5. Describe the empirical studies on family in India. What are their emerging trends?
भारत में परिवार पर आनुभविक अध्ययनों का उल्लेख करें । उनकी उदीयमान प्रवृत्तियाँ क्या हैं?
6. What is Jajmani system? Analyse its characteristics.
जजमानी व्यवस्था क्या है? इसकी विशेषताओं का विश्लेषण करें ।
7. Write a note on Rural Urban continuum.
ग्रामीण-नगरीय सांतत्यक पर एक टिप्पणी लिखें ।
8. What is meant by Slum? Discuss its causes and Ill-effects.
गंदी बस्ती से क्या तात्पर्य है? इसके कारण और दुष्प्रभाव बताएँ ।
9. Explain the concept of rural power structure. What are the bases of rural power structure?
ग्रामीण शक्ति संरचना की अवधारणा स्पष्ट कीजिये । ग्रामीण शक्ति संरचना के क्या आधार हैं?
10. Write notes on any two of the following:-
निम्नलिखित में से किन्हीं दो पर टिप्पणी लिखें :
 - (a) Urban society
नगरीय समाज
 - (b) Tradition Rural Family
परम्परागत ग्रामीण परिवार
 - (c) Migration
प्रवर्जन
 - (d) Rural Society
ग्रामीण समाज

Nalanda Open University
Annual Examination - 2011
B.A. Sociology (Honours), Part-III
Paper-VII (Social Welfare & Social Legislation)

Time: 3.00 Hrs.

Full Marks: 80/70

Answer any *Five* Questions. All questions carry equal marks.
किन्हीं पाँच प्रश्नों के उत्तर लिखिए । सभी प्रश्नों के अंक समान हैं ।

1. Explain the difference between Directive Principles of State Policy and Fundamental Rights.
राज्य नीति के निर्देशक तत्व एवं मूल अधिकार में अन्तर स्पष्ट कीजिए ।
2. Analyse the impact of Social Legislation on Indian Society.
भारतीय समाज पर सामाजिक विधान के प्रभाव का विश्लेषण कीजिए ।
3. What is Liberalisation? How are Liberalisation and Globalisation related to one another.
उदारीकरण क्या है? उदारीकरण एवं विश्वव्यापीकरण एक दूसरे से किस प्रकार सम्बन्धित है?
4. What do you understand by Health Care? Describe the importance of Public Health Care Schemes.
स्वास्थ्य सुरक्षा से क्या समझते हैं? जन स्वास्थ्य योजनाओं के महत्व का वर्णन कीजिए ।
5. What do you understand by Scheduled Tribes? Illuminate the constitutional provisions meant for them.
अनुसूचित जनजाति से क्या समझते हैं? उनसे संबंधित संवैधानिक प्रावधानों पर प्रकाश डालिए ।
6. Analyse the problems of Indian women.
भारतीय महिलाओं की समस्याओं की विवेचना कीजिए ।
7. What is Fundamental Right? Describe its importance.
मूल अधिकार क्या है? इसके महत्व की चर्चा कीजिए ।
8. Discuss the main provisions of Employees State Insurance Act 1948.
कर्मचारी राज्य बीमा अधिनियम 1948 की मुख्य प्रावधानों का उल्लेख कीजिए ।
9. Write a note on the condition of children in India.
भारत में बालकों की परिस्थिति पर टिप्पणी लिखिए ।
10. Give description of Governmental Social Welfare organization at State level in Bihar.
बिहार में राज्य स्तर के सरकारी समाजकल्याण संगठनों का विवरण दीजिए ।

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: सिर्फ 8वें पत्र की परीक्षा की तिथि में परिवर्तन की सूचना :

नालन्दा खुला विश्वविद्यालय का षष्ठम दीक्षान्त समारोह, दिनांक-21.02.2011 को निर्धारित है, इसलिए आपके सिर्फ 8वें पत्र की परीक्षा अब दिनांक-22.02.2011 को 03.30 बजे से 06.30 बजे तक सम्पन्न होगी । सिर्फ आठवे पत्र की परीक्षा की तिथि एवं समय में परिवर्तन किया गया है । शेष परीक्षा पूर्व निर्धारित कार्यक्रम के अनुरूप होंगी ।

Nalanda Open University
Annual Examination - 2011
B.A. Sociology (Honours), Part-III
Paper-VIII (Industrial Sociology)

Time: 3.00 Hrs.

Full Marks: 80/70

Answer any *Five* Questions. All questions carry equal marks.
किन्हीं पाँच प्रश्नों के उत्तर लिखिए । सभी प्रश्नों के अंक समान हैं ।

1. Define Industrial Sociology. Discuss its importance in India.
औद्योगिक समाजशास्त्र को परिभाषित कीजिये । भारत में इसके महत्व का विवेचन करें ।
2. What do you understand by Formal Organization? Describe its Nature and merits-demerits.
औद्योगिक संगठन से क्या समझते हैं? इसके प्रकृति एवं गुण दोषों का वर्णन करें ।
3. Discuss the main characteristics of Indian Industrial Labour.
भारतीय औद्योगिक श्रमिकों की मुख्य विशेषताओं की विवेचना करें ।
4. What is work? Examine different viewpoints towards work.
कार्य क्या है? कार्य के प्रति विभिन्न दृष्टिकोणों की समीक्षा करें ।
5. Define motivation. Analyse the importance of Motivation.
अभिप्रेरणा को परिभाषित कीजिए । अभिप्रेरणा के महत्व का विश्लेषण करें ।
6. What is meant by Management? Discuss its organization and functions.
प्रबन्धन से क्या तात्पर्य है? इसके संगठन और कार्यों की विवेचना करें ।
7. Industrial conflict is a natural characteristics of Industrial Organization. Discuss.
औद्योगिक संघर्ष औद्योगिक प्रतिष्ठानों की एक स्वाभाविक विशेषता है । विवेचन करें ।
8. Describe merit-demerits of various methods of settlement of Industrial disputes.
औद्योगिक विवादों को सुलझाने के विविध विधियों के गुण-दोषों का वर्णन कीजिये ।
9. Give a brief account of the growth of collective Bargaining in India.
भारत में सामूहिक सौदेबाजी के विकास का संक्षिप्त विवरण दें ।
10. Analyse the main provisions of Factories Act, 1948.
कारखाना अधिनियम 1948 के मुख्य प्रावधानों की व्याख्या करें ।

Nalanda Open University
Annual Examination - 2011
B.A. Social Work (Honours), Part-III
Paper-V

Time: 3.00 Hrs.

Full Marks: 80/70

Answer any *Five* Questions. All questions carry equal marks.

किन्हीं पाँच प्रश्नों के उत्तर लिखिए । सभी प्रश्नों के अंक समान हैं ।

1. Explain the concept of Marriage. Describe the historical evolution as well as major functions of marriage.
विवाह की अवधारणा स्पष्ट करें । विवाह के ऐतिहासिक विकास एवं विवाह के प्रमुख कार्यों का विवरण दें ।
2. What do you understand by Mate (life partner) selection? Describe the major determinants of selection of mate (Life Partner)
जीवन साथी के चयन से आप क्या समझते हैं? जीवन साथी के चुनाव की प्रमुख कसौटियों का वर्णन करें ।
3. Describe the elements of value structure in family.
परिवार में मूल्य संरचना के तत्वों का वर्णन करें ।
4. Define Marital Roles. What changes are taking place in roles of male-female today?
वैवाहिक भूमिकाओं को परिभाषित करें । आज के युग में स्त्री-पुरुष भूमिकाओं में क्या परिवर्तन हो रहे हैं?
5. What do you understand by family life cycle and development functions of family? Discuss.
परिवार जीवन चक्र और परिवार विकासात्मक कार्यों से आप क्या समझते हैं? विवेचन करें ।
6. Describe the family welfare policies in different five year plans.
विभिन्न पंचवर्षीय योजनाओं में परिवार कल्याण कार्यक्रम की नीतियों का वर्णन करें ।
7. What is Intra-Uterine Device (I.U.D.S.)? Describe its advantages.
इन्ट्रा-युटेराइन डिवाइस (आईयूडीएस) क्या है? इसके लाभों का वर्णन करें ।
8. Describe definition and types of Abortion.
गर्भपात की परिभाषा और प्रकार का विवरण दें ।
9. What is Divorce? Analyse the causes of divorce.
तलाक क्या है? तलाक के कारणों का विश्लेषण करें ।
10. Evaluate the provisions of Dowry Prohibition Act, 1961.
दहेज निषेध अधिनियम, 1961 के प्रावधानों का मूल्यांकन करें ।

Nalanda Open University
Annual Examination - 2011
B.A. Social Work (Honours), Part-III
Paper-V (Introduction to HIV/AIDS)

Time: 3.00 Hrs.

Full Marks: 80/70

Answer any *Five* Questions. All questions carry equal marks.
 किन्हीं पाँच प्रश्नों के उत्तर लिखिए । सभी प्रश्नों के अंक समान हैं ।

1. Describe the regional scene of HIV/AIDS.
एच.आई.वी./एड्स के क्षेत्रीय परिदृश्य का वर्णन करें ।
2. Discuss the stages of growth of HIV/AIDS.
एच.आई.वी./एड्स के विकास के चरणों का विवेचन करें ।
3. Describe the traditional idea related with HIV/AIDS.
एच.आई.वी. एड्स से सम्बन्धित पारम्परिक धारणाओं का वर्णन करें ।
4. Describe the history of HIV/AIDS in India.
भारत में एच.आई.वी./एड्स के इतिहास का वर्णन करें ।
5. Describe the work plan for the prevention of transmission of HIV/AIDS from mother to child.
माँ से शिशु में एच.आई.वी./एड्स संचरण के रोकथाम की कार्यनीतियों का वर्णन करें ।
6. Evaluate the efforts of the Indian Govt. for the prevention of HIV/AIDS.
एच.आई.वी./एड्स की रोकथाम के लिये भारत सरकार के प्रयासों का मूल्यांकन करें ।
7. Describe the necessity for precaution in the prevention of HIV/AIDS.
एच.आई.वी./एड्स की रोकथाम में सावधानियों की आवश्यकता का वर्णन करें ।
8. What is the need of monitoring in HIV/AIDS? Discuss.
एच.आई.वी./एड्स में सतत देखभाल की क्या आवश्यकता है? विवेचन करें ।
9. Describe the role of medical system in HIV/AIDS.
एच.आई.वी./एड्स में चिकित्सा प्रणाली की भूमिका का वर्णन करें ।
10. Write notes on any **two** of the following:
निम्नलिखित में से किन्हीं दो पर टिप्पणी लिखें ।
 - (i) एच.आई.वी. में परामर्श (Counselling in HIV)
 - (i) एच.आई.वी. और कानून (HIV and law)
 - (i) हीमोफिलिया (Hemophilia)

Nalanda Open University
Annual Examination - 2011
B.A. Social Work (Honours), Part-III
Paper-VI (Substance Abuse & Counselling)

Time: 3.00 Hrs.

Full Marks: 80/70

Answer any *Five* Questions. All questions carry equal marks.
किन्हीं पाँच प्रश्नों के उत्तर लिखिए । सभी प्रश्नों के अंक समान हैं ।

1. Analyse the relationship between HIV/AIDS and drug Abuse.
एच. आई. वी./एड्स और मादक द्रव्य दुरुपयोग में सम्बन्ध बताएं ।
2. What do you understand by toxic Drug? Describe the wrong notional about Drug abuse.
मादक द्रव्य से क्या समझते हैं? मादक द्रव्य दुरुपयोग से सम्बन्धित गलत धारणाओं का वर्णन करें ।
3. Analyse the causes of illegal trade of Toxic Drug.
मादक द्रव्य के अवैध व्यापार के कारणों का विश्लेषण करें ।
4. Describe the national scene of Drug abuse.
मादक द्रव्य दुरुपयोग के राष्ट्रीय परिदृश्य का विवरण दें ।
5. Examine the effect of drug abuse on reproductive health.
प्रजनन स्वास्थ्य पर मादक द्रव्य के प्रभाव की समीक्षा करें ।
6. What is Addiction? Describe the stages of Addiction.
व्यसन क्या है? व्यसन की अवस्थाओं का वर्णन करें ।
7. What is the impact of Drug abuse on community? Discuss.
मादक द्रव्य दुरुपयोग का समुदाय पर क्या प्रभाव पड़ता है? विवेचना करें ।
8. Describe the role of Non governmental Organizations in the prevention of drug abuse.
मादक द्रव्य दुरुपयोग की रोकथाम में गैरसरकारी संगठनों की भूमिका का वर्णन करें ।
9. What do you understand by communication? Narrate the functions of communication.
संचार से क्या समझते हैं? संचार के कार्यों का विवरण दें ।
10. Write a note on the history of communication.
संचार के इतिहास पर एक टिप्पणी लिखें ।

Nalanda Open University
Annual Examination - 2011
B.A. Social Work (Honours), Part-III
Paper-VII

Time: 3.00 Hrs.

Full Marks: 80/70

Answer any *Five* Questions. All questions carry equal marks.
किन्हीं पाँच प्रश्नों के उत्तर लिखिए । सभी प्रश्नों के अंक समान हैं ।

1. What is Disaster? Evaluate the different views on the nature of disaster.
आपदा क्या है? आपदाओं की प्रकृति से सम्बन्धित विभिन्न दृष्टिकोणों का मूल्यांकन करें ।
2. What do you understand by national perspective of disaster? Describe.
आपदा के राष्ट्रीय सन्दर्भ से आप क्या समझते हैं? वर्णन करें ।
3. Give a brief account of disaster-situations in the Indian subcontinent.
भारतीय महाद्वीप में आपदा की स्थिति का संक्षिप्त विवरण दें ।
4. How can ill-effects of floods be minimised? Discuss.
बाढ़ के प्रतिकूल प्रभावों को किस प्रकार कम किया जा सकता है? चर्चा करें ।
5. What do you understand by Disaster warning system? Analyse in detail.
आपदा चेतावनी प्रणाली से क्या समझते हैं? विस्तार से विश्लेषण करें ।
6. Discuss the concept and importance of leadership in disaster-situation.
आपदा की स्थितियों में नेतृत्व की अवधारणा और महत्व की चर्चा करें ।
7. Discuss the importance of stock-piling in disaster management.
आपदा प्रबन्धन में माल-संभरण के महत्व की चर्चा करें ।
8. What do you understand by community participation? Why is it needed in disaster management?
सामुदायिक भागीदारी से क्या समझते हैं? आपदा प्रबंधन में इसकी आवश्यकता क्यों पड़ती है ?
9. Write an essay on need of relief and rehabilitation in disaster.
आपदा में राहत एवं पुनर्वास की आवश्यकता पर निबंध लिखें ।
10. Write a note on the role of air force, army and navy in disaster management.
आपदा प्रबन्धन में वायुसेना, थल सेना एवं नौसेना की भूमिका पर संक्षिप्त टिप्पणी लिखें ।

Nalanda Open University
Annual Examination - 2011
B.A. Social Work (Honours), Part-III
Paper-VIII

Time: 3.00 Hrs.

Full Marks: 80/70

Answer any *Five* Questions. All questions carry equal marks.
किन्हीं पाँच प्रश्नों के उत्तर लिखिए । सभी प्रश्नों के अंक समान हैं ।

1. Describe the damages caused to buildings, infrastructural facilities and bridges by the Uttarakashi earthquake.
उत्तरकाशी भूकम्प से इमारतों, अधिसंरचनागत सुविधाओं तथा पुलों को हुए नुकसान का विवरण दें ।
2. State the objectives of measures initiated by the Govt. to provide relief to earthquakes affected people.
भूकम्प से प्रभावित लोगों को राहत पहुँचाने के लिए राज्य सरकार के द्वारा किये गये उपायों के उद्देश्य बताएँ ।
3. Describe the specific problems that arise on account of floods in India.
भारत में बाढ़ के कारण पैदा होने वाली कुछ विशेष समस्याओं का विवरण दें ।
4. What measures for relief should be arranged during post-land slide situations? Explain.
भूस्खलन के बाद की स्थितियों में राहत के क्या उपाय किया जाना चाहिये? बताएँ ।
5. Discuss the plans of relief and rehabilitation programme in relation to earthquake.
भूकम्प से सम्बन्धित राहत एवं पुनर्वास कार्यक्रम के योजनाओं का विवेचन करें ।
6. What is Disaster Preparedness Plan? Describe the different steps of Disaster Preparedness Plan.
आपदा तैयारी योजना क्या है? आपदा तैयारी योजना के विभिन्न चरणों का वर्णन दें ।
7. What is Area mapping? Describe the use of zoning of accident area.
क्षेत्र मान चित्रण क्या है? दुर्घटना क्षेत्रण के उपयोग का वर्णन करें ।
8. What is Dengue? What are the causes for the spread of Dengue in India?
डेंगू क्या है? भारत में डेंगू फैलने के क्या कारण हैं?
9. Define Rehabilitation. Why is Rehabilitation Package required in various disasters?
पुनर्वास की परिभाषा दें । विभिन्न आपदाओं में पुनर्वास पैकेज की आवश्यकता क्यों पड़ती है?
10. Describe the main programmes of Social Rehabilitation Plan.
सामाजिक पुनर्वास योजना के मुख्य कार्यक्रमों का वर्णन करें ।

Nalanda Open University
Annual Examination - 2011
B.A. /B.Sc. Geography (Honours), Part-III
Paper-V (Geographical thought and Applied Geography)

Time: 3.00 Hrs.

Full Marks: 80/75

Answer any **Five** Questions in all, selecting **three** from section '**A**' and **two** from section '**B**'. All questions carry equal marks.

खण्ड 'अ' से तीन तथा खण्ड 'ब' से दो प्रश्नों को चुनकर कुल पाँच प्रश्नों के उत्तर लिखिए। सभी प्रश्नों के अंक समान हैं।

Section-'A' (खण्ड'अ')

1. Discuss the contributions of Karl Ritter in the development of modern Geography.
आधुनिक भूगोल के विकास में कार्ल रिटर के योगदानों का वर्णन करें।
2. Discuss the contribution of Blache towards geographical thought.
भौगोलिक चिंतन के विकास में ब्लाश के योगदानों की चर्चा कीजिए।
3. 'Ratzel was an environmental-deterministic'. Justify the statement.
'रेटजेल एक पर्यावरणीय निर्यातवादी' था। इस कथन की पुष्टि कीजिए।
4. Explain the dualism of determinism and possibilism.
निर्यातवाद एवं संभववाद सम्बन्धी द्वैतवाद भी व्याख्या कीजिए।
5. Explain various types of models with examples.
विभिन्न प्रकार के मॉडलों का उदाहरण सहित व्याख्या कीजिए।
6. Critically explain the agriculture location theory of von-Thunen.
वॉन थ्यूटेन की कृषि अवस्थिति सिद्धांत की आलोचनात्मक विवेचना कीजिए।

Section-'B' (खण्ड'ब')

7. What do you mean by applied Geography? Clarify the meaning of Applied Geography.
व्यावहारिक भूगोल से आप क्या समझते हैं? व्यावहारिक भूगोल का अर्थ स्पष्ट कीजिए।
8. Explain the quality of agricultural land. What are its impact on agricultural production?
कृषि भूमि की गुणवत्ता की व्याख्या कीजिए। कृषि के उत्पादन पर इसका क्या प्रभाव पड़ता है।
9. Write an essay on man-environment relationship.
मानव-वातावरण सम्बन्ध पर एक निबन्ध लिखिए।
10. Throw light on industrial situation in India.
भारत में औद्योगिक स्थिति पर प्रकाश डालिए।

Nalanda Open University
Annual Examination - 2011
B.A. /B.Sc. Geography (Honours), Part-III
Paper-VI (Human and settlement Geography)

Time: 3.00 Hrs.

Full Marks: 80/75

Answer any **Five** Questions in all, selecting **three** from section '**A**' and **two** from section '**B**'. All questions carry equal marks.

खण्ड 'अ' से तीन तथा खण्ड 'ब' से दो प्रश्नों को चुनकर कुल पाँच प्रश्नों के उत्तर लिखिए। सभी प्रश्नों के अंक समान हैं।

Section-'A' (खण्ड'अ')

1. Explain the economic and social activities of man in the mountainous region.
पर्वतीय क्षेत्र में मानव के आर्थिक एवं सामाजिक क्रियाकलापों की व्याख्या कीजिए।
2. Give an account of the main physical, economic and cultural features of the monsoon or the desert region.
मानसूनी-अथवा मरूस्थलीय प्रदेश की प्रमुख प्राकृतिक, आर्थिक एवं सांस्कृतिक विशेषताओं का विवरण प्रस्तुत कीजिए।
3. Discuss the pattern of the growth of population in the world.
विश्व में जनसंख्या-वृद्धि के प्रारूपों का वर्णन कीजिए।
4. Throw light on the causes and consequences of international migration.
अन्तर्राष्ट्रीय स्थानान्तरण के कारण एवं प्रभाव पर प्रकाश डालिए।
5. Describe briefly the main cultural regions of the world.
विश्व के प्रमुख सांस्कृतिक प्रदेशों का संक्षिप्त वर्णन प्रस्तुत कीजिए।
6. Describe the habitation, economic and social conditions of Bushman.
बुशमैन के निवास-क्षेत्र, अर्थव्यवस्था तथा सामाजिक दशाओं का वर्णन कीजिए।

Section-'B' (खण्ड'ब')

7. Give an account of the evaluation of rural settlement in the Ganga valley.
गंगा के मैदानी भाग में वस्तियों के उद्भव एवं विकास की विवेचना कीजिए।
8. Discuss the causes and consequences of rural-urban migration.
ग्रामीण-नगरीय स्थानान्तरण के कारण एवं परिणामों की विवेचना कीजिए।
9. Present a geographical account of the evolution and growth of urbanisation in India.
भारत में नगरीकरण के उद्भव एवं विकास का भौगोलिक विवरण प्रस्तुत कीजिए।
10. Describe urban functions and its classification.
नगरीय कार्यकलाप एवं दूसरे वर्गीकरण का वर्णन कीजिए।

Nalanda Open University
Annual Examination - 2011
B.A. /B.Sc. Geography (Honours), Part-III
Paper-VII (Population Geography & Bio-Geography)

Time: 3.00 Hrs.

Full Marks: 80/75

Answer any **Five** Questions in all, selecting **three** from section '**A**' and **two** from section '**B**'. All questions carry equal marks.

खण्ड 'अ' से **तीन** तथा खण्ड 'ब' से **दो** प्रश्नों को चुनकर कुल **पाँच** प्रश्नों के उत्तर लिखिए। सभी प्रश्नों के अंक समान हैं।

Section-'A' (खण्ड'अ')

1. Define population geography and throw light on its scope.
जनसंख्या भूगोल को परिभाषित कीजिए तथा उसके विषय क्षेत्र पर प्रकाश डालिए।
2. Discuss the population growth pattern in the developed and developing nations.
विकसित एवं विकासशील देशों में जनसंख्या वृद्धि के प्रतिरूप की चर्चा कीजिए।
3. Discuss different types of population projection.
जनसंख्या प्रक्षेपण के प्रकारों की विवेचना कीजिए।
4. What do you mean by population dynamics? How do fertility and mortality influence it?
जनसंख्या की गन्यात्मकता से आप क्या समझते हैं? यह किस प्रकार उत्पादकता एवं मर्त्यता से प्रभावित होती है?
5. Throw light on the problems arising out of growing urban population.
नगर में बढ़ती जनसंख्या से उत्पन्न समस्याओं पर प्रकाश डालिये।
6. What is meant by population policy? Explain the purpose of population policy.
जनसंख्या नीति से क्या समझते हैं? जनसंख्या नीति के उद्देश्यों का वर्णन कीजिए।

Section-'B' (खण्ड'ब')

7. Give an account of the meaning and scope of bio-geography.
जैव-भूगोल का अर्थ एवं विषय क्षेत्र का विवरण दीजिए।
8. Classify Indian soils and discuss their salient features.
भारतीय मिट्टी की वर्गीकरण कीजिए तथा उनकी मुख्य विशेषताओं का वर्णन कीजिए।
9. How light and temperature influence the distribution of plants? Discuss.
किस प्रकार पौधे के वितरण को प्रकाश और तापमान प्रभावित करते हैं? इसका वर्णन कीजिए।
10. What is the impact of social forestry on local ecology? Explain in detail.
स्थानीय परिस्थितिकी पर समाजिक वानिकी का क्या प्रभाव पड़ता है? वर्णन कीजिए।

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**Programme for B.A/ B.Sc. (Geography) Hons.
Counselling Class & Practical Exam, 2011**

Counselling Class	Time	
24.02.2011	12.00 - 02.00 P.M.	02.00 - 04.00 P.M.
25.02.2011	12.00 - 02.00 P.M.	02.00 - 04.00 P.M.
Examination (All Examinees)	02.00 - 04.00 P.M.	
26.02.2011	Paper - VIII	
27.02.2011	Paper - VIII	
Venue :	Department of Geography, Patna College, Patna (Patna University)	

Nalanda Open University
Annual Examination - 2011
B.A. /B.Sc. Geography (Honours), Part-III
Paper-VIII (Environmental Geography)

Time: 3.00 Hrs.

Full Marks: 80/75

Answer any **Five** Questions in all, selecting **three** from section '**A**' and **two** from section '**B**'. All questions carry equal marks.

खण्ड 'अ' से **तीन** तथा खण्ड 'ब' से **दो** प्रश्नों को चुनकर कुल **पाँच** प्रश्नों के उत्तर लिखिए। सभी प्रश्नों के अंक समान हैं ।

Section-'A' (खण्ड'अ')

1. Describe the scope of study of ecology.
पारिस्थितिकी के अध्ययन क्षेत्र का वर्णन कीजिए ।
2. Explain the causes of air and water pollution and describe their adverse effects.
वायु प्रदूषण तथा जल प्रदूषण के कारणों को स्पष्ट करते हुए उनके प्रतिकूल प्रभाव का वर्णन कीजिये ।
3. What are the impact of human activities on environment? Describe them.
मानवीय क्रिया कलापों का पर्यावरण पर क्या प्रभाव पड़ता है? उनका वर्णन कीजिए ।
4. Distinguish between natural and man made ecosystem. Explain.
प्राकृतिक पारिस्थितिकी तंत्र और कृत्रिम पारिस्थितिकी तंत्र में क्या अन्तर है? वर्णन कीजिए ।
5. Give an account of various aspects and causes of environmental degradation.
पर्यावरण के ह्रास के विभिन्न पक्षों तथा कारणों का विवरण दीजिए ।
6. What are the causes of global warming? What is essential for controlling it?
भूमंडलय उष्मता के क्या कारण हैं? इसके नियंत्रण के लिए क्या करना आवश्यक है ।

Section-'B' (खण्ड'ब')

7. Critically examine the concept of region.
प्रदेश की संकल्पनाओं का आलोचनात्मक परीक्षण कीजिए ।
8. Discuss the sustainable development plan in the context of regional development.
टिकाऊ विकास योजना की प्रादेशिक विकास के सन्दर्भ में विवेचना कीजिए ।
9. Define Multi-level planning and give a note on its evolution in India.
बहुस्तरीय नियोजन को परिभाषित कीजिए तथा भारत में इसके उदभव पर टिप्पणी दीजिए ।
10. Make a comparative study of formal and functional regions.
स्वरूपीय तथा कार्योपलक्षी प्रदेशों का तुलनात्मक अध्ययन प्रस्तुत कीजिए ।

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Nalanda Open University
Annual Exam-2011,
BA/B.Sc., Home Science (Hons) Part-III
Paper-V [वस्त्र विज्ञान एवं परिधान]

Time: 3Hrs

Full Marks: 80/70

किन्ही पाँच प्रश्नों के उत्तर लिखिए । सभी प्रश्नों के अंक समान है ।
Answer any five Questions. All Questions carry equal marks.

1. वस्त्र विज्ञान को परिभाषित कीजिए तथा इसके वर्गीकरण का उल्लेख कीजिए ।
Define Textile and describe its classification.
2. कपास की भौतिक एवं रसायनिक विशेषताओं का विवेचन कीजिए ।
Discuss the Physical and Chemical property of Cotton.
3. पोलिमाइड क्या है? इसे 66 पोलिमर क्यों कहा जाता है? इसकी भौतिक विशेषताओं का वर्णन कीजिए ।
What is Polyamide? Why is it called 66-Polymer? Describe its physical properties.
4. धागा के निर्माण की प्रक्रिया का विवेचन कीजिए ।
Discuss the process of the making of yarn.
5. धागा क्रमांक प्रणाली से आप क्या समझते हैं? इसकी कार्य प्रणाली की व्याख्या कीजिए ।
What do you understand by yarn numbering system? Describe its working?
6. सिलाई मशीन की खराबियों का उल्लेख कीजिए । उन्हें सुधारने के उपायों का वर्णन कीजिए ।
Enumerate the defects of sewing machine. Describe the measures for their eradication.
7. ड्राफ्टिंग का तात्पर्य क्या है? ड्राफ्टिंग की विधि का वर्णन कीजिए ।
What is the meaning of drafting? Describe the method of drafting?
8. पेपर पैटर्न की उपयोगिता का उल्लेख कीजिए । इसे तैयार करने हेतु आवश्यक नियमों का परीक्षण कीजिए ।
Describe the utility of Paper Pattern. Examine the essential rules for preparing it.
9. आद्योलिखित में से किन्हीं दो पर संक्षिप्त टिप्पणियाँ लिखिए :-
Write short notes on any two of the following:-
(क) एक्रिलिक रेशा (Acrylic Fibres)
(ख) लिनेन (Linen)
(ग) डेक्रोन (Decron)
10. विशेष उद्देश्य के लिए वस्त्रों की परिष्कृति की प्रक्रिया एवं महत्व पर एक निबंध लिखिए ।
Write an essay on the process and importance of special purpose finishing of Textiles.

Nalanda Open University
Annual Exam-2011,
BA/ B.Sc., Home Science (Hons) Part-III
Paper-VI [बाल मनोविज्ञान]

Time: 3Hrs

Full Marks: 80/70

किन्ही पाँच प्रश्नों के उत्तर लिखिए । सभी प्रश्नों के अंक समान है ।
Answer any five Questions. All Questions carry equal marks.

1. बाल मनोविज्ञान के विषय-विस्तार को संक्षेप में बताएँ ।
Describe briefly the scope of the child psychology.
2. बाल-मनोविज्ञान की किन्हीं दो विधियों की व्याख्या करें ।
Describe any two methods of child psychology.
3. बाल मनोविज्ञान की विधि के रूप में निरीक्षण विधि की आलोचनात्मक व्याख्या करें।
Critically evaluate observation method as a method of child psychology.
4. विकास को प्रभावित करने वाले वंशानुगत या आनुवंशिक कारकों की भूमिका का विवेचन कीजिए ।
Discuss the role of heredity or genetic factor that influences development.
5. अधिगम को प्रभावित करनेवाले व्यक्तिगत तथा वातावरण सम्बन्धी कारकों की विवेचना कीजिए ।
Discuss the personal and environmental related factors influencing learning.
6. साधनात्मक अनुबन्धन या अनुकूलन सिद्धांत की विवेचना कीजिये ।
Discuss the Operant conditioning theory of learning.
7. सामाजिक विकास की प्रमुख कसौटियों का वर्णन करें ।
Discuss the main criteria of social development.
8. बुद्धि को प्रभावित करने वाले कारकों पर एक विवरणात्मक टिप्पणी लिखें ।
Write a descriptive note on factors influencing learning.
9. खेल के किन्हीं दो सिद्धान्तों की आलोचनात्मक व्याख्या करें ।
Critically explain any two theories of play.
10. निम्नांकित में किन्हीं दो पर संक्षिप्त टिप्पणियाँ लिखें :-
Write short notes on any two of the following:-
 - (a) Chain learning श्रृंखला अधिगम
 - (b) Trial Error theory प्रयत्न त्रुटि सिद्धांत
 - (c) Problem of learning अधिगम की समस्याएँ

Nalanda Open University
Annual Exam-2011,
BA/ B.Sc., Home Science (Hons) Part-III
Paper-VII [प्रसार शिक्षा]

Time: 3Hrs

Full Marks: 80/70

किन्ही पाँच प्रश्नों के उत्तर लिखिए । सभी प्रश्नों के अंक समान है ।
Answer any five Questions. All Questions carry equal marks.

1. प्रसार शिक्षा के क्षेत्र पर एक निबन्ध लिखें ।
Write an essay on scope of extension education.
2. "प्रसार शिक्षा के दर्शन" पर एक निबन्ध लिखिये ।
Write an essay on "Philosophy of Extension Education"
3. प्रसार शिक्षा के मूलभूत सिद्धांतों को स्पष्ट कीजिये ।
Explain the basic principles of extension education.
4. प्रसार शिक्षण विधियों के वर्गीकरण का विवेचन कीजिये ।
Discuss the classification of extension teaching methods.
5. श्रव्य-दृश्य साधन को परिभाषित कीजिये तथा प्रसार शिक्षा में इसके महत्वों की विवेचना कीजिये ।
Define Audio-Visual Aids and discuss its importance in extension teaching.
6. दृश्य-श्रव्य साधनों के वर्गीकरण पर एक निबन्ध लिखें ।
Write an essay on classification of Audio-Visual Aids.
7. ग्रामीण समाजशास्त्र से आप क्या समझते हैं? इसके क्षेत्र की विवेचना कीजिये ।
What do you understand by Rural Sociology? Discuss its scope.
8. एक समूह के नेता की भूमिका, कार्य एवं गुणों का वर्णन कीजिये ।
Describe role, function and merits of leader of a group.
9. मूल्यांकन को परिभाषित कीजिये तथा इसके सिद्धांतों की विवेचना कीजिये ।
Define evaluation and discuss its principles.
10. कार्यक्रम नियोजन के सिद्धांतों का वर्णन कीजिये ।
Describe principles of programme planning.

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Notice for B.A./B.Sc. Home Science (Hons.), Part-III

Counselling Classes cum Practical

Group A	080390001 to 080390228
Group B	080390229 to 080390353 080520003 to 080520008 & All Old Students

Group	Counselling Classes		Practical Exam	
	Date	Time	Date	Time
A	24.02.2011 to 26.02.2011	2.00 P.M. to 4.00 P.M.	27.02.2011 (Sunday)	10.00 A.M. to 1.00 P.M.
B	24.02.2011 to 26.02.2011	2.00 P.M. to 4.00 P.M.	27.02.2011 (Sunday)	1.00 P.M. to 4.00 P.M.

Venue : 12th Floor, Biscomaun Tower, Nalanda Open University' Comp. Lab.
Nalanda Open University

Annual Exam-2011,
BA/ B.Sc., Home Science (Hons) Part-III
Paper-VIII [पारिवारिक संबंध]

Time: 3Hrs

Full Marks: 80/70

किन्ही पाँच प्रश्नों के उत्तर लिखिए । सभी प्रश्नों के अंक समान है ।
Answer any five Questions. All Questions carry equal marks.

1. परिवार को परिभाषित कीजिए तथा परिवार में सदस्यों का स्थान एवं संबंध निरूपित कीजिए ।
Define family and establish place and relationship of family members in the family.
2. परिवार में बदलाव के कारकों पर एक निबंध लिखें ।
Write an essay on factors of changes in the family.
3. संयुक्त एवं एकाकी परिवार का तुलनात्मक विवरण प्रस्तुत कीजिए ।
Present a comparative statement of joint family and Nuclear family.
4. विवाह के प्रकारों पर एक निबंध लिखें ।
Write an essay on types of marriage.
5. वैवाहिक समायोजन की अवधारणा की विवेचना कीजिये ।
Discuss the concept of Matrimonial Adjustment.
6. विवाह विच्छेद पर एक निबंध लिखिए ।
Write an essay on divorce.
7. पारिवारिक संबंधों के विभिन्न प्रकारों की विवेचना कीजिए तथा पारिवारिक संबंधों में गिरावट के कारणों की व्याख्या कीजिए ।
Discuss the various forms of family relationships and explain the causes of deterioration of family relationships.
8. माता-पिता और बालकों के संबंध के निर्धारकों की विवेचना कीजिए ।
Discuss the determinants of parent-child relationship.
9. घर में अनुशासन को प्रभावित करने वाले कारकों की विवेचना कीजिए ।
Discuss factors influencing discipline in home.
10. वृद्धावस्था के दौरान समायोजन को प्रभावित करने वाले कारकों की विवेचना कीजिए।
Discuss the factors influencing adjustment during old age.

Nalanda Open University
Annual Examination - 2011
B.Sc. Physics (Honours), Part-III
Paper-V (Mathematical Physics & Classical Mechanics)

Time: 3.00 Hrs.

Full Marks: 80/75

Answer any *Five* Questions. All questions carry equal marks.

1. Use power series solution method to solve Legendre's differential equation. What is the compact form of Legendre's polynomial of l th order.
2. What is Dirac delta function. Give all its properties. Also, prove that $\int_{-\infty}^{\infty} x \delta(x) dx = 0$.
3. What is analytic function? Derive Cauchy-Riemann conditions for analytic function.
4. State and prove Cauchy's Integral theorem.
5. State and prove Laurent's theorem.
6. Describe the algebraic properties of tensors of arbitrary rank using both covariant and contravariant indices.
7. Write down the Hamilton Function for (a) a simple harmonic oscillator & (b) a spherical pendulum. Then, set up the Hamilton's canonical equations and find expressions of time periods.
8. What are Poisson's brackets? State and prove some of its important properties.
9. Discuss the free rotation of a symmetrical rigid body using Lagrangian method. Find the angular velocity for uniform precession and the frequency of small nutations about the uniform precession.
10. Apply the theory of action-angle variables to find the time period of small oscillations of a simple pendulum.

Nalanda Open University
Annual Examination - 2011
B.Sc. Physics (Honours), Part-III
Paper-VI (Quantum Mechanics & Statistical Mechanics)

Time: 3.00 Hrs.

Full Marks: 80/75

Answer any *Five* Questions. All questions carry equal marks.

1. State and explain correspondence principle in quantum mechanics. What are the 3 important postulates of quantum mechanics?
2. Show that if any two quantum mechanical Hermitian operators corresponding to Classical observables do not commute, then the simultaneous measurement of these observables is subject to an uncertainty. Deduce an expression for the uncertainty relation known as Heisenberg's Uncertainty relation.
3. Solve the Schrodinger's equation for one dimensional infinite square well. Find expressions for eigen values and normalized eigenfunction in this case.
4. Solve the problem of one dimensional harmonic oscillator in quantum mechanics to obtain eigenvalues and eigen functions.
5. If σ_x , σ_y and σ_z are the 3 Pauli spin matrices and \vec{A} is an arbitrary vector, evaluate $\vec{\sigma} \cdot \vec{A}$ and express it in the form of a 2 x 2 matrix.
6. Give the fundamental assumptions of statistical mechanics. What is an ensemble? Distinguish between Canonical and micro-Canonical ensemble.
7. Find the entropy of a classical ideal gas and explain what is meant by Gibb's paradox. Also, explain how the paradox is resolved.
8. Deduce Box-Einstein statistics for bosons and obtain Planck radiation formula using it.
9. State and explain Ising model in Zeroth approximation. Explain its use.
10. Write short notes on any two of the following:
 - (i) Microcanonical ensemble
 - (ii) Maxwell-Boltzmann Statistics
 - (iii) 1st and 2nd order phase transition
 - (iv) Bose-Einstein Condensation.

Nalanda Open University
Annual Examination - 2011
B.Sc. Physics (Honours), Part-III
Paper-VII

Time: 3.00 Hrs.

Full Marks: 80/75

Answer any *Five* Questions. All questions carry equal marks.

1. Obtain electric and magnetic field intensity due to a uniformly moving charge using Lienard-Wiechart potentials.
2. Obtain transformations of electric and magnetic field under Lorentz transformation.
3. Discuss the microscopic and macroscopic properties of plasma. What do you mean by 'plasma oscillations'?
4. Write note on any two of the following:
 - (i) Debye screened potential
 - (ii) Pinch effect
 - (iii) Covariance of Maxwell's equations under Lorentz transformation.
5. State and explain Paschen-Beck effect.
6. State and explain Moseley's law. Discuss the importance of Moseley's observations of x-ray spectra of different elements.
7. Obtain rotational spectra due to a diatomic molecule treated as a rigid rotator.
8. Discuss angular momentum, magnetic moment and electric quadrupole moment associated with an atomic nucleus. What is the importance of these properties of a nucleus?
9. Explain the shell model of nucleus. How is this model used to explain the angular momentum of ground state of nucleus?
10. Describe fine structures and hyper fine structures in ESR spectrum.



Nalanda Open University
Annual Examination - 2011
B.Sc. Physics (Honours), Part-III
Paper-VIII

Time: 3.00 Hrs.

Full Marks: 80/75

Answer any Five Questions. All questions carry equal marks.

1. What are Miller indices? Show that in a crystal of cubic structure, the distance between the planes with

Miller indices h, k, l , equal to $d = \frac{a}{\sqrt{h^2 + k^2 + l^2}}$.

2. Deduce the Laue's equation of diffraction of X-ray by a crystal. Show how Bragg's law follows from that equation.
3. Calculate the binding energy of ionic crystal. Prove that the value of Madelung constant for an infinite line of ions is $2 \log 2$.
4. Give an outline of the free electron theory of metals. Obtain relation between electrical and thermal conductivity of metal and hence derive Wiedemann - Franz law.
5. Discuss Kronig - Penny model for energy band structure of solids. Distinguish clearly between a metal, semiconductor and insulators on the basis of energy bands in solids.
6. State and explain, 'Superposition theorem' & 'Maximum power transfer theorem'.
7. Discuss the functions of a low pass filter with a neat circuit diagram.
8. What is a Zener diode? Explain its working and show, with a neat circuit diagram, its use as a 'voltage stabilizer'.
9. What is an amplifier? Discuss the working of an R. C. Coupled amplifier with a neat circuit diagram. Give the expression for voltage gain.
10. What do you mean by a logic gate? Explain De Morgan's theorem with the help of a schematic diagram.

B.Sc. Physics (Hons.) Part-III, Programme for Practical Councelling.		
Date	12.00 to 2.00PM	2.00 to 4.00PM
04.03.2011	Paper-VII, All students of Physics Hons.	Paper-VIII, All students of Physics Hons.
05.03.2011	Paper-VII, All students of Physics Hons.	Paper-VIII, All students of Physics Hons.

B.Sc. Physics (Hons.) Part-III, Programme for Practical Councelling.		
Date	12.00 to 2.00PM	2.00 to 4.00PM
04.03.2011	Paper-VII, All students of Physics Hons.	Paper-VIII, All students of Physics Hons.
05.03.2011	Paper-VII, All students of Physics Hons.	Paper-VIII, All students of Physics Hons.
07.03.2011	Paper-VII, All students of Physics Hons.	Paper-VIII, All students of Physics Hons.
07.03.2011	Paper-VII, All students of Physics Hons.	Paper-VIII, All students of Physics Hons.

Nalanda Open University
Annual Examination - 2011
B.Sc. Chemistry (Honours), Part-III
Paper-V (Physical Chemistry)

Time: 3.00 Hrs.

Full Marks: 80/75

Answer any *Five* Questions. All questions carry equal marks.

1. What is Half life period of reaction? What is mean by third order reaction? Derive an expression for the rate constant of Third order reaction.
2. Discuss the radius ratio rule and its relation with co-ordination number. Also discuss the structure of NaCl and CsCl .
3. What are different types of adsorption? Derive Langmuir adsorption isotherm explaining the basic assumptions on which the derivation depends. Discuss its Limitation.
4. Find the number of phases, number of components and degree of freedom in the following system:
 - (i) $\text{Na}_2\text{SO}_4 \cdot 10\text{H}_2\text{O} (\text{s}) \rightleftharpoons \text{Na}_2\text{SO}_4 (\text{s}) + 10\text{H}_2\text{O} (\text{g})$
 - (ii) $\text{NH}_4\text{Cl} (\text{g}) \rightleftharpoons \text{NH}_3 (\text{g}) + \text{HCl} (\text{g})$
 - (iii) $\text{CaCO}_3 (\text{s}) \rightleftharpoons \text{CaO} (\text{s}) + \text{CO}_2 (\text{g})$
5. Write short notes on any three of the followings:
 - (a) Hetrogeneous catalyst
 - (b) Importance of Dipole moment
 - (c) Bond moment
 - (d) Mill indices or Bravias lattice
6. What are the postulates of Collision theory? Write an expression for rate constant in terms of parameter of Collision theory.
7. What is meant by "Viscosity and Coefficient of Viscosity" of a liquid? What is effect of temperature on viscosity of liquid? How viscosity is related to the structure of molecule.
8. Distinguish between primary and secondary process of photochemical process. Discuss photo chemical reaction between hydrogen and chlorine or hydrogen and bromine.
9. State and explain phase rule and use it to discuss the phase diagram of sulphur system.
10. What is Catalysis? State and explain characteristic feature of catalysed reaction. Discuss the mechanism of enzyme catalysed reaction.

Nalanda Open University
Annual Examination - 2011
B.Sc. Chemistry (Honours), Part-III
Paper-VI

Time: 3.00 Hrs.

Full Marks: 80/75

Answer any Five Questions. All questions carry equal marks.

1. What are the basic postulates of valence bond theory for the formation of complex compounds? How does this theory account for the fact: (i) $[\text{Ni}(\text{CN})_4]^{2-}$ is diamagnetic and square planar (ii) $[\text{NiCl}_4]^{2-}$ is tetrahedral and para-magnetic.
2. What is molecular orbital theory of chemical bonding? Describe bonding and antibonding molecular orbital and bond order. Arrange O_2^+ , O_2^{2-} , O_2^- and O_2 in order of increasing bond-order.
3. (i) Explain the following:
 - (a) Acetic acid is a weak base in aqueous medium but shows strong acidic property in liquid ammonia.
 - (b) Alkali metal - ammonia solution are good electrolytic conductor.(ii) What are protic and aprotic solvents? Give examples.
4. Discuss the main postulates of quantum mechanics. What is the significance of ψ and ψ^2 ?
5. What is meant by low spin and high spin complexes? Which complex has the large value of Δ_0 in the following pair of complexes? Assign reason for your answer.
 - (i) $[\text{Co}(\text{CN})_6]^{3-}$ and $[\text{Co}(\text{NH}_3)_6]^{3+}$
 - (ii) $[\text{Fe}(\text{CN})_6]^{4-}$ and $[\text{Fe}(\text{CN})_6]^{3-}$
 - (iii) $[\text{Rh}(\text{NH}_3)_6]^{++}$ and $[\text{Co}(\text{NH}_3)_6]^{++}$
6. What are important ores of Molybdenum? Extract molybdenum from one of its important ore. Why does Molybdenum exhibit different oxidation states?
7. (a) Calculate free ion ground term for V^{++} , Cr^{2+} , Co^{3+} and Ni^{2+}
(b) Free ion term of d^2 are $1G$, $3F$, $3P$, $1S$ and $1D$. Arrange these terms in increasing order of energy according to Hund's rule.
8. What is the position of Uranium in the periodic table? Describe one method of extraction of uranium from pitch Blende. What are its important properties and uses?
9. Explain the following:
 - (a) Magnetic permeability
 - (b) Spin magnetic moment
 - (c) Paramagnetic and diamagnetic substances
10. Write short notes on any two of the following:
 - (a) Platinum black
 - (b) aufbau principle
 - (c) Hole formulism
 - (d) Spongy Platinum



Nalanda Open University
Annual Examination - 2011
B.Sc. Chemistry (Honours), Part-III
Paper-VII

Time: 3.00 Hrs.

Full Marks: 80/75

Answer any Five Questions. All questions carry equal marks.

1. Give one example of each the following class of dyes. Furnish one method of synthesis and one application of each of them:
(a) Azo dye (b) Triphenyl methane dye
(c) Phthalein dye (d) Indigoid dye
2. Discuss the mechanism, preparation and application of any two of the following reagents:
(a) nitrous acid (b) N-Bromosuccinimide
(c) Aluminium Isopropoxide
3. Explain the following:
(a) Why uric acid is called acid when it does not contain carboxylic acid group
(b) Benzene does not decolourise bromine water though it has three double bonds
(c) The hydrolysis of ethyl chloride by aqueous sodium hydroxide is accelerated by the addition of potassium iodide.
(d) Salicylic acid is more acidic than benzoic acid
(e) Furan is less aromatic than both pyrrole and thiophene.
4. (i) What are polynuclear hydrocarbon and how are they classified? Give examples.
(ii) How would you bring about the following conversions:
(a) naphthalene to anthranilic acid
(b) Benzene to Naphthalene
(c) Anthracene to 9-Acetylanthracene
(d) Naphthalene to phenanthrene
5. (a) What do you understand by term Orientation?
(b) Illustrate with two examples how in aromatic compounds further substitution is governed by the nature of substituent present in the ring.
(c) How would you determine the position of the substituents in a disubstituted benzene with help of Korner's rule.
6. Describe the molecular structure of pyrrole. Discuss its resemblance with phenol. How would you obtain pyrrole from (a) furan and (b) succinamide.
7. How will you convert the following:
(a) Urea into uric acid
(b) Uric acid into parabanic Acid
(c) Uric acid into purine
(d) Uric acid into xanthine
8. Write notes on any two of the following
(a) Electrophilic reagent
(b) Inductive Effect
(c) SN^1 and SN^2 reaction
9. (a) What do you mean by the term anthoxanthins? Discuss general methods for ascertaining structure of anthoxanthins.
(b) Write short notes on
(i) Kostanecki's synthesis
(ii) Baker-Venkatraman synthesis
10. Define the term aromaticity making a special mention of Huckel's Rule. Discuss Modern theory of Aromaticity? Does this rule apply strictly in case of pyridine & pyrrole?

Nalanda Open University
Annual Examination - 2011
B.Sc. Chemistry (Honours), Part-III
Paper-VIII

Time: 3.00 Hrs.

Full Marks: 80/75

Answer any *Five* Questions. All questions carry equal marks.

1. Synthetic rubber is misnomer. How? What is difference between natural rubber and artificial rubber? What is Vulcanization of rubber? Mention the use of Vulcanization.
2. (i) Give the total range of electromagnetic wave and mark the region of I.R. UV and visible spectra.
(ii) Explain the term:
 - (a) H_2 molecule does not give I.R. Spectra where as HCl molecule give.
 - (b) I.R. Spectra of CO_2 molecule has two spectral line but I.R. Spectra of H_2O molecule has three spectral line.
3. What are chemical fuel? What is meant by calorific value of fuel? Describe one method by which calorific value of solid fuel is determined.
4. What is difference between infra red, ultraviolet and visible - absorption spectra. Discuss basic principle involved in each case for various application.
5. Discuss the various methods employed for primary waste water treatment and also explain the objective of secondary waste water treatment. Describe any one of the biological waste water treatment process.

Or

Write on the following:

- (a) Water treatment for municipal purposes.
- (b) Sewage treatment.
6. Describe clearly what do you know about coupling constant. How will you distinguish between cis and trans isomers with the help of n m r spectroscopy .
7. What is meant by air pollution. Describe main effect of air pollution to living kingdom as well to atmosphere. Discuss methods through which air pollution can be controlled.
8. Define electronic spectroscopy and also explain the following electronic transition in ultraviolet spectroscopy.
 - (a) $\sigma \rightarrow \sigma^*$ transition
 - (b) $n \rightarrow \sigma^*$ transition
 - (c) $\Pi - \Pi^*$ transition
 - (d) $n \rightarrow \Pi^*$ transition

Or

Write an essay on uv absorption spectra and its application. Why absorption bands are formed instead of sharp line in the spectra.

9. Define and explain soil pollution. What are the causes of soil pollution? What are the effects of soil pollutants. What is importance of soil biosphere?
10. What do the following terms means? Explain any two of the following:
 - (a) Acid - Rain
 - (b) Green House effect
 - (c) Ozone Layer

Nalanda Open University
Annual Examination - 2011
B.Sc. Mathematics (Honours), Part-III
Paper-V

Time: 3.00 Hrs.

Full Marks: 80/75

Answer any Six Questions, selecting at least one question from each group.

Group-A

1. (a) Define a metric space. Let X be a non-empty set and d be a map defined as:
 $d : X \times X \rightarrow \mathbb{R}$, such that
 $d(x, y) = 1$, if $x \neq y$
 $= 0$ if, $x = y$
 Then, show that 'd' is a metric on X .
 (b) Introduce an open sphere in a metric space. Let X be a non-empty set and 'd' be a metric on X . Let $\sigma : X \rightarrow \mathbb{R}$ be defined as $\sigma(x, y) = d(x, y)$, if $d(x, y) < 1$,
 $= 1$, if $d(x, y) \geq 1$.
 Show that σ is a metric on X .
2. (a) Show that the intersection of a finite number of open sets in a metric space (X, d) , is open in X .
 (b) Let (X, d) be a metric space and $F \subseteq X$. Then, F is closed iff F contains each of its accumulation points. Prove this statement.
3. (a) Define a Cauchy sequence. Prove that every Convergent sequence in a metric space is a Cauchy sequence.
 (b) Let (X, d) be a metric space and x_0 be a fixed point in X . Show that the real Valued function f_{x_0} defined by $f_{x_0}(x) = d(x, x_0)$, is continuous.
4. (a) Define a sub-space of a topological space (X, T) and (Y, T_y) be a sub-space of (X, T) . Then show that a sub-set E of Y is relatively closed in Y , where $E = Y \cap F$ for some closed sub-set F of X .
 (b) Show that every discrete space is a Hausdoff space.

Group-B

5. (a) State and prove a necessary and sufficient condition for R-integrability of a bounded function on an interval $[a, b]$.
 (b) If f is a Continuous function on $[0, 1]$, show that $\lim_{n \rightarrow \infty} \int_0^1 \frac{nf(x)}{1+n^2x^2} dx = \frac{\pi}{2} f(0)$
6. (a) Prove that a bounded function on a closed interval $[a, b]$, is Riemann integrable if it has only a finite number of points of discontinuity in $[a, b]$.
 (b) Define a function f on $[0, 1]$ as follows:
 $f(x) = \frac{1}{n}$ for $\frac{1}{n+1} < x \leq \frac{1}{n}$, $n \in \mathbb{N}$.
 Show that $f \in R[0, 1]$ and $\int_0^1 f dx = \frac{\pi^2}{6} - 1$

Group-C

7. State and prove Cauchy's integral test.
8. (a) If $\sum y_n$ Converges and (x_n) is a Convergent monotonic sequence, then show that $\sum x_n y_n$ Converges.
 (b) Prove that the infinite product

$\left(1 + \frac{1}{2}\right)\left(1 + \frac{1}{3}\right)\left(1 + \frac{1}{4}\right)\left(1 + \frac{1}{5}\right)\left(1 + \frac{1}{6}\right)\left(1 + \frac{1}{7}\right)\dots\dots\dots$ to α , diverges to $+\alpha$.

Group-D

9. (a) Let N be a non-zero normed linear space. Show that N is a Banach space iff $\{x : \|x\| = 1\}$ is complete.
- (b) Prove that a normed linear space is a Banach space iff every absolutely summable series, is summable.
10. (a) A linear transformation from a normed linear space N to a normed linear space N' , is Continuous if and only if T is bounded in the sense that there exists a real number $k \geq 0$ with the property that $\|T(x)\| \leq k\|x\|$, for every $x \in N$. Prove this.
- (b) If M is a closed linear sub-space of a normed linear space N and if T is the mapping of N on to N/M defined by $T(x) = x+M$. Show that T is a continuous linear transformation for which $\|T\| \leq 1$.
11. (a) Give definition and example of an inner product space with full justification.
- (b) By taking R^2 to be real normed linear space given by $\|x\| = \sqrt{x_1^2 + x_2^2}$ where $x = (x_1, x_2)$, show that T is a continuous linear transformation, where $T: R^2 \rightarrow R$ defined by $T(x_1, x_2) = x_1$
12. (a) Define Hilbert space. Show that the space l^2 with the inner product of two vectors $x = (x_1, x_2, \dots, x_n)$ and $y = (y_1, y_2, \dots, y_n)$ defined $(x, y) = \sum_{i=1}^n x_i \bar{y}_i$, is a Hilbert space where $l^2 = \{(x_1, x_2, \dots, x_n) : x_1, x_2, \dots, x_n \in C\}$.
- (b) Consider the linear space $P[0,1]$ of all real valued polynomials on $[0,1]$ with the inner product given by $(f, g) = \int_0^1 f(t)g(t)dt$, where $f, g \in P[0,1]$. Show that its is an inner product space but not a Hilbert space.

Nalanda Open University
Annual Examination - 2011
B.Sc. Mathematics (Honours), Part-III
Paper-VI

Time: 3.00 Hrs.

Full Marks: 80/75

Answer any Six Questions, selecting at least one question from each group.

Group-A

1. (a) Define an automorphism of a group. Let $x \in G$, then prove that the function f defined by $f(g) = x^{-1}gx$, for $g \in G$, is an automorphism of G .
- (b) Let $C(G)$ denote the centre of a group G and $I(G)$ be the set of all inner automorphism on G . Then, prove that

$$G/C(G) \cong I(G)$$

2. (a) Let G be a finite group and $|G| = p^n$, $n > 0$, p a prime. Show that G has a non-trivial centre of order at least p .
- (b) If $f: R \rightarrow T$ be a homomorphism of a ring R onto a ring T . Then, show that f is an isomorphism iff kernel $f = \{0\}$
3. State and prove the fundamental theorem of Homomorphism of rings.
4. (a) Let F be a field, then prove that $f[x]$ is a principal ideal ring and more over it is a principal ideal domain.
- (b) Give an example of an ideal which is prime but not maximal (supported by full logic).

Group-B

5. State and prove Schroder - Bernstein Theorem.
6. Define addition and multiplication of cardinality. Hence, establish distributive laws of multiplication over addition.
7. Prove that $2^{\aleph_0} = \mathbb{C}$, where the symbols used have their usual meaning.

Group-C

8. (a) Define a partition on a non-empty set. Show that the equivalent classes under equivalence relation, the equivalent classes are either mutually disjoint or equal.
- (b) Show that every partition of a set introduces an equivalence relation.
9. (a) Define probability distribution and determine the mean and variance of Binomial Distribution.
- (b) Find the solution of the recurrence relation $a_n = a_{n-1} + 2a_{n-2}$ where $a_0 = 2$ and $a_1 = 7$.

Group-D

10. (a) If $f(z)$ is an analytic function of z , show that $\left(\frac{\partial^2}{\partial x^2} + \frac{\partial^2}{\partial y^2}\right) |f(z)|^2 = 4 |f'(z)|^2$.
- (b) Obtain the Taylor's and Laurent's series which represents the function $\frac{z^2 - 1}{(z + 2)(z + 3)}$ in the regions (I) $|z| < 2$, (II) $2 < |z| < 3$ respectively.
11. State and prove Taylor's Theorem.
12. (a) If $f(z)$ is an analytic and single valued function in $|z - a| < R$, prove that $f'(a) = \frac{1}{\pi r} \int_0^{2\pi} P(\theta) e^{i\theta} d\theta$, where $P(\theta)$ is the real part of $f(a + re^{i\theta})$ and $0 < r < R$.
- (b) Explain the kind of singularities of the function $\sin\left(\frac{1}{1-z}\right)$ at $z=1$.

Nalanda Open University
Annual Examination - 2011
B.Sc. Mathematics (Honours), Part-III
Paper-VII

Time: 3.00 Hrs.

Full Marks: 80/75

Answer any Six Questions, selecting at least one question from each group.

Group-A

1. (a) Define a feasible solution of a Linear Programming Problem (L.P.P.). Prove that the set of all feasible solutions of a linear programming problem form a convex set.
- (b) Solve the following linear programming problem graphically.

$$\begin{aligned} \text{Max } Z &= 4x_1 + 7x_2 \\ \text{Subject to } & x_1 + 2x_2 \leq 20, \\ & x_1 + x_2 \leq 15, \\ & x_2 \leq 8, \end{aligned}$$

where $x_1 \geq 0, x_2 \geq 0$.

2. Apply Simplex Method to find the solution of the following linear programming problem:

$$\begin{aligned} \text{Max } Z &= 5x_1 + 7x_2 \\ \text{Subject to } & 2x_1 + 3x_2 \leq 13, \\ & 3x_1 + 2x_2 \leq 12, \end{aligned}$$

where $x_1 \geq 0, x_2 \geq 0$.

3. Use matrix minima method to obtain an initial basic feasible solution of the following transportation problem.

	W_1	W_2	W_3	W_4	Capacity
F_1	19	30	50	10	7
F_2	70	30	40	60	9
F_3	40	8	70	20	18
Requirement	5	8	7	14	

Group-B

4. Find a necessary and sufficient condition for the integrability of the total differential equation.

$$Pdx + Qdy + RdZ = 0$$

5. (a) Solve the differential equation
 $Z(Z - Y) dx + Z(Z + x) dy + x(x + y) dZ = 0$
- (b) Apply charpit's method to find the complete integral of

$$px + qy = pq$$

6. (a) Solve

$$\frac{\partial^2 Z}{\partial x^2} - 2 \frac{\partial^2 Z}{\partial x \partial y} - 15 \frac{\partial^2 Z}{\partial y^2} = 12 \chi \gamma$$

- (b) Construct the general solution of the Lag range's linear equation

$$p\chi(y^2 - Z^2) - qy(Z^2 + \chi^2) = Z(\chi^2 + y^2), \text{ by}$$

forming its auxilliary equation.

7. (a) Use Monge's method to find the complete solution of the equation

$$2x^2r - 5xys + 2y^2t + 2(px + qy) = 0$$

- (b) Find the orthogonal projection on the $\chi - Z$ plane of the curves which lie on the paraboloid

$$3Z = \chi^2 + y^2 \text{ and satisfy the equation } 2dz = (\chi + Z)d\chi + y d\gamma.$$

Group-C

8. (a) Find the attraction of a uniform solid sphere at an external point.
(b) A frustum of a uniform thin hollow Cone attracts a particle placed at the vertex. Show that the attraction is $2\Pi r \rho \sin \alpha \cos \alpha \log \frac{R}{r}$, where R and r are the radii of circular ends. α the semi vertical angle and ρ the surface density of the cone.
9. (a) State and establish Laplace theorem in Cartesian form.
(b) Prove that the half of the potential of a uniform spherical shell at an external point O, is due to that portion of the sphere which is nearer to O.

Group-D

10. (a) Prove that the difference between the pressures at two points of a homogeneous fluid varies as the depth of one point below the other.
(b) A hemi-spherical vessel filled with water, is placed in an inverted position on a horizontal table. Find the resultant thrust of the water on the vessel.
11. (a) Find the depth of the centre of pressure of a circular area of radius a immersed vertically in a homogeneous liquid with its centre at a depth h below the free surface.
(b) A rod of small cross section and of density ρ has a small portion of a metal of weight $\frac{1}{n}$ th that of the rod attached to one extremity. Prove that the rod will float at any angle (inclination) in a liquid of density σ if $(n+1)^2 \rho = n^2 \sigma$.
12. (a) Establish the standard formula $dp = \rho(X dx + Y dy + Z dz)$, where the symbols used have their usual meanings.
(b) If components of the forces, parallel to the axes of Co-ordinates respectively, acting on the elements of fluid at (x, y, z) are given by

$$X = y^2 + yz + z^2,$$

$$Y = z^2 + zx + x^2,$$

$$Z = x^2 + xy + y^2$$

proportionally. Find the curves of equipressure and equidensity.

Nalanda Open University
Annual Examination - 2011
B.Sc. Mathematics (Honours), Part-III
Paper-VIII

Time: 3.00 Hrs.

Full Marks: 80/75

Answer any Five Questions. All questions carry equal marks. Calculator are Allowed.

1. (a) Prove that the Identify

$$u_1x + u_2x^2 + u_3x^3 + \dots = \frac{x}{1-x}u_1 + \frac{x^2}{(1-x)^2}\Delta u_1 + \frac{x^3}{(1-x)^3}\Delta^2 u_1 + \dots$$

- (b) If $fn(x)$ is a polynomial of degree n in x then Prove that $\Delta^n fn(x)$ is a constant.

2. (a) State and Prove Lagrange's Interpolation formula for unequal Intervals.

- (b) Find the cubic Polynomial Interpolation which takes on values

$$f_0 = 5, f_1 = 1, f_2 = 9, f_3 = 25, f_4 = 55 \text{ find } f_5$$

3. (a) Find the first and second derivatives of the function $y = f(x)$ tabulated below at the point $x = 1.1$

x	1	1.2	1.4	1.6	1.8	2.00
f(x)	0.00	0.1280	0.5440	1.2960	2.4320	4

- (b) Using the following table find $f(5)$

x	0	2	3	4	5	7	9
y=f(x)	4	26	58	112	-	466	922

4. (a) Derive Simpson's $\frac{3}{8}$ th Rule for numerical evaluational integrals.

- (b) Find by Wseddle's rule the value of $I = \int_4^{5.2} \log_e^x dx$

5. (a) Solve the equations

$$16u_{x+2} - 8u_{x+1} + u_x = 0$$

- (b) Solve

$$2u_{x+2} - 5u_{x+1} + 2u_x = 0 \text{ find the particular solution when } u_0 = 1, u_1 = 1$$

6. Explain Euler's method. Hence find approximately y for $x = 0.1$ by Euler's method.

$$\text{Given } \frac{dy}{dx} = \frac{y-x}{y+x} \text{ with } y = 1 \text{ for } x = 0$$

7. Use Runge - Kuttal method of fourth order to solve $y' = xy$ for $x = 1.4$ and initially $x = 1, y=2$
 $h = 0.2$

8. (a) Solve it by Gauss - Jordan's method

$$x_1 + 2x_2 + x_3 = 8$$

$$2x_1 + 3x_2 + 4x_3 = 20$$

$$4x_1 + 3x_2 + 3x_3 = 16$$

- (b) Explain Gauss Seidel Method

9. (a) Solve the equations by Relaxation Method.

$$9x_1 - 2x_2 + x_3 = 50$$

$$x_1 + 5x_2 - 3x_3 = 18$$

$$-2x_1 + 2x_2 + 7x_3 = 19$$

- (b) Explain Reguli-Falsi Method.

10. (a) Explain Newton - Raphson method.

- (b) Solve the Equation $x^4 - 8x^3 + 39x^2 - 62x + 50 = 0$ using Bairstow's method with initial condition $p = q = 0$

Annual Examination - 2011
B.Sc. Botany (Honours), Part-III
Paper-V

Time: 3.00 Hrs.

Full Marks: 80/ 75

Answer any **Five** Questions. **Question No. 1 is compulsory.** All questions carry equal marks.

1. Multiple choice questions.

- (i) In a fully turgid cell, which one of the following is correct?
(a) O.P. is greater than T.P. (b) T.P. is greater than O.P.
(c) O.P. is equal to T.P. (d) None of the above.
- (ii) The Cytoplasm of a cell shrinks in a solution. The phenomenon will be called as.
(a) Plasmolysis (b) Osmosis
(c) Both of these (d) None of these
- (iii) A membrane wli allow the solvent as well as a little amount of some solute to pass' is called
(a) Impermeable (b) Selectively permeable
(c) Semi permeable (d) Permeable
- (iv) VAM stands for
(a) Vascular Areolar Mycorrhizae (b) Vascular Aerial mycorrhizae
(c) Vascular Alveolar mycorrhizae (d) Vascular Arbuscular mycorrhizae
- (v) Transpiration would be most rapid when.
(a) Atmosphere is fully humid (b) Air is still
(c) Weather is cloudy (d) Weather condition is very dry
- (vi) Opening of stomata is due to
(a) Turgidity of guard cell (b) Size of guard cell
(c) Number of guard cells (d) Amount of CO₂ in atmosphere
- (vii) In C₃ pathway of CO₂ fixation, the first stable product is
(a) Ribulose biphosphate (b) Phosphoglyceric acid
(c) Phosphoglyoxylic acid (d) None of these
- (viii) In green cells photolysis of water is linked to
(a) PS I (b) PS II
(c) Both PS I and PS II (d) Cytochrome
- (ix) Photosynthesis takes place chiefly in
(a) Blue light (b) Red light
(c) Green light (d) Indigo
- (x) Krebs cycle takes place in
(a) Chloroplast (b) Ribosome
(c) Mitochondria (d) ER
- (xi) How many ATP will be produced during the production of one molecule of Acetylc CoA from one molecule of Pyruvic acid?
(a) 3 (b) 6
(c) 8 (d) 38
- (xii) Growth is a
(a) Permanent Change (b) Reversible Change
(c) Temporary Change (d) None
- (xiii) Elongation of genetically dwarf plant is brought about by the application of
(a) cytokinin (b) Gibberellins
(c) x-ray (d) Vitamin
- (xiv) Stimulation of cell division is mainly associated with
(a) Auxin (b) Gibberellins
(c) Cytokinins (d) Florigen
- (xv) Free living N₂ fixing bacteria are found in
(a) Air (b) Soil
(c) Root nodule (d) None of these

2. Explain the mechanism of stomatal regulation.

3. Discuss the mechanism of photophosphorylation.

4. Give an account of Krebs cycle.

5. What are Auxins? Describe the mechanism of action of auxins.

[P.T.O]

6. What are cytokinins? Discuss their importance in plants.
7. Give an account of phytochrome system and flower initiation.
8. What are the various elements necessary for the healthy growth of green plants? From which sources these are obtained?

OR

Write notes on any two of the following:

- (a) Plasmolysis
- (b) Non-cyclic photophosphorylation
- (c) Alcoholic fermentation
- (d) Electron transport system.

9. Explain the different stages of Nitrogen cycle.
10. Differentiate between the terms of any two pairs of the following.
 - (a) Diffusion and osmosis
 - (b) Photophosphorylation and oxidative phosphorylation
 - (c) Gibberellin and Auxin
 - (d) Geotropism and phototropism.

OR

Nalanda Open University
Annual Examination - 2011
B.Sc. Botany (Honours), Part-III
Paper-VI

Time: 3.00 Hrs.

Full Marks: 80/ 75

Answer any **Five** Questions. **Question No. 1 is compulsory.** All questions carry equal marks.

1. Multiple choice questions.

- (i) In which category you will place the phytoplanktons?
(a) Consumers (b) Producers
(c) Decomposer (d) None of these
- (ii) The pyramid of number is inverted when the producer is
(a) Grass (b) Tree
(c) Both of these (d) None
- (iii) Net primary productivity is equal to
(a) Gross primary productivity-organic matter lost in respiration
(b) Total amount produced by photosynthesis
(c) Both of these (d) None of these
- (iv) Snake can be placed as
(a) Secondary consumer (b) Tertiary consumer
(c) Top consumer (d) All of these
- (v) Nitrifying bacteria produce
(a) NH_3 to NO_3 (b) Protein to NH_3
(c) NO_3 to N_2 (d) None of these
- (vi) The largest reservoir of S and P in the biosphere is
(a) Aerial atmosphere (b) Rocks
(c) Organism (d) River
- (vii) Aggregation is
(a) Increase in number of species so that they come close to each other
(b) Establishment of Species on bare area
(c) Reaching of propagules to bare area (d) None of these
- (viii) **Eichhornia** is a hydrophyte because
(a) Its leaf is green (b) Flowers are coloured
(c) Root has pocket (d) All of these
- (ix) Acid rain is formed due to union of water with
(a) SO_2 (b) Dust
(c) N_2 (d) All of these
- (x) **Rhizophora** occurs in
(a) Central India (b) Alpine Zone
(c) Assam (d) Andaman and Nicobar
- (xi) Black soil is found in
(a) Haryana (b) Rajasthan
(c) Maharashtra (d) Orissa
- (xii) The property of soil based on the size of particles is termed as
(a) Texture (b) Colour
(c) Field capacity (d) Water holding capacity
- (xiii) Which type of water is used by plants?
(a) Hygroscopic (b) Gravitational Water
(c) Capillary water (d) Bound Water
- (xiv) Hazaribagh National Park is located in
(a) Jharkhand (b) Utrakhand
(c) Andhra Pradesh (d) Tamil Nadu
- (xv) Arsenic in underground water comes from
(a) Rock (b) Pesticides
(c) Fume of automobiles (d) Radioactive waste

2. Write an essay on plant community.
3. What is the productivity of ecosystem? Write the methods of its measurement.
4. What is succession? Describe the succession in a bare pond.
5. What are the morphological and anatomical features of plants growing in aquatic condition, submerged in and floating on surface of water?
6. What is conservation? Describe the methods of conservation of soil.
7. Write short notes on any two of the following:
 - (a) Biogeochemical Cycle
 - (b) Non-conventional source of energy
 - (c) Desertification
 - (d) Forest ecosystem
8. What is social forestry? Give an account of social forestry. How it is beneficial to the society?

Or

Explain two of the following terms:

- (a) Plant indicator
 - (b) Biosphere reserve
 - (c) Threatened species
 - (d) Protected area
9. Describe the different categories of natural resources.
 10. Pass your comment on the following statements.
 - (a) Washing of cloth in the river Ganga is a condemnable practice.
 - (b) Defecation in the field is unhygienic practice.
 - (c) Smoking in public place is injurious to large number of people.
 - (d) Burning of crackers at many occasions is highly injurious

END

Nalanda Open University

Annual Examination - 2011
B.Sc. Botany (Honours), Part-III
Paper-VII

Time: 3.00 Hrs.

Full Marks: 80/ 75

Answer any **Five** Questions. **Question No. 1 is compulsory.**

All questions carry equal marks.

1. Multiple choice questions. Out of four options, select only one as correct answer.
- (i) Nucleolus was discovered by
 - (a) Fontana
 - (b) Altmann
 - (c) Crick
 - (d) Nirenberg
 - (ii) Nuclear membrane disappears during
 - (a) Anaphase
 - (b) Telophase
 - (c) Early prophase
 - (d) Late prophase
 - (iii) A nucleosome consists of
 - (a) only DNA
 - (b) Histone and linker DNA
 - (c) RNA and histone
 - (d) Histone with DNA wrapped around
 - (iv) DNA duplication occurs during
 - (a) S period
 - (b) G₁ period
 - (c) G₂ period
 - (d) Prophase
 - (v) The first stage of cell division is
 - (a) Prophase
 - (b) Interphase
 - (c) Metaphase
 - (d) Anaphase
 - (vi) Budding in Yeast is an example of
 - (a) Brackymeiosis
 - (b) Endomitosis
 - (c) Normal mitosis
 - (d) Amitosis
 - (vii) Double helix DNA model was given by
 - (a) Fisher and Heldane
 - (b) Watson and Crick
 - (c) Lamark and Darwin
 - (d) Hugo de Vries
 - (viii) Two standards of DNA are attached by H-bond between
 - (a) A-G, G-C
 - (b) A-C, G-T
 - (c) A-G, T-C
 - (d) AU - G-C
 - (ix) Chromosomes having almost equal arms are
 - (a) Metacentric
 - (b) Acrocentric
 - (c) Concentric
 - (d) Telocentric
 - (x) Which is an example of cytoplasmic inheritance?
 - (a) Eye colour in Drosophila
 - (b) Flower colour in pea
 - (c) Height in pea
 - (d) Sterile pollen
 - (xi) After crossing two plants, the progeny was found to be male sterile due to maternal inheritance. The gene for male sterility resides in
 - (a) Nucleus
 - (b) Chloroplast
 - (c) Cytoplasm
 - (d) Mitochondria
 - (xii) Essential gene material is
 - (a) DNA
 - (b) RNA
 - (c) Fat and Protein
 - (d) Protein
 - (xiii) Somatic cell division includes
 - (a) Karyokinesis only
 - (b) cytokinesis only
 - (c) cytokinesis followed by karyokinesis
 - (d) karyokinesis followed by cytokinesis
 - (xiv) In meiosis, the chromatids separate during
 - (a) Anaphase I
 - (b) Anaphase II
 - (c) Metaphase I
 - (d) Metophase II
 - (xv) Number of mitotic division required to produce 128 cells from a single cell
 - (a) 7
 - (b) 14
 - (c) 16
 - (d) 32
2. Discuss in brief the structure of DNA and compare it with that of RNA.
3. Give an account of the cell division that occurs in the formation of pollen grain from pollen mother cell.

4. Define linkage? Give experimental proof of the linked genes.
5. What is nucleosome? Give an account of the structure of nucleosome.
6. Give an account of Mendelian Law of Independent assortment. Why is it sometimes not shown by some genes?
7. Describe the cell cycle in details.
8. Write short notes on any two of the following:
 - (a) Deficiency
 - (b) Nucleoside
 - (c) β - chromosome
 - (d) RNA
9. Define plant introduction and acclimatizaion. Discuss the process.
10. Write any two of the following:
 - (a) Back cross method
 - (b) Procedure for pure line selection
 - (c) Emasculation
 - (d) Pedigree method

Nalanda Open University

Annual Examination - 2011
B.Sc. Botany (Honours), Part-III
Paper-VIII (Genetics)

Time: 3.00 Hrs.

Full Marks: 80/ 75

Answer any **Five** Questions. **Question No. 1 is compulsory.**

All questions carry equal marks.

1. Multiple choice questions. Out of four options, select only one as correct answer.
 - (i) A ratio of 9:3:3:1 is modified in complimentary genes to
(a) 15:1 (b) 13:3 (c) 9:7 (d) 12:3:1
 - (ii) Inhibitory factors contain modified ratio as
(a) 13:3 (b) 9:6:1 (c) 1:4:6:4:1 (d) 9:7
 - (iii) Duplicate factors show the ratio.
(a) 9:7 (b) 15:1 (c) 12:3:1 (d) 9:6:1
 - (iv) Additive factor or polymerism contains modified ratio as
(a) 1:4:6:4:1 (b) 9:6:1 (c) 9:3:4 (d) 12:3:1
 - (v) Variation in individual chromosome number of an organism is
(a) Euploidy (b) Polyploidy (c) Aneuploidy (d) Aberraton
 - (vi) A trisomic individual has a chromosome number of
(a) $2n - 1$ (b) $2n + 2$ (c) $2n + 1$ (d) $2n + 3$
 - (vii) Turner's syndrome is due to
(a) Monosomy (b) Tetrasomy (c) Nullisomy (d) Trisomy
 - (viii) If haploid number of chromosome in a cell is 12, the monosomic number will be
(a) 24 (b) 25 (c) 23 (d) 21
 - (ix) A very important method in plant breeding is
(a) Transformation (b) Hybridizaton (c) Duplicafion (d) Heterosis
 - (x) The credit for decifering the genetic code goes to
(a) Korenberg and Odhoa (b) Nirenberg, Holley and Khorana
(c) Ochoa and Korenberg (d) Nirenberg and Korenberg
 - (xi) The genetic information is coded in the form of
(a) ATP (b) DNA (c) Histone (d) Protein
 - (xii) Restriction enzymes are found in
(a) Virus (b) Bacteria (c) Amoeba (d) Liver cell
 - (xiii) Which of the following technique is used by forensic laboratory in crime detection?
(a) DNA sequencing (b) DNA nicking
(c) Gene therapy (d) DNA finger printing
 - (xiv) Genetic engineering aim at
(a) Destroying wild gene (b) Preserving wild gene
(c) Curing human diseases by introducing new genes
(d) None of the above
 - (xv) A bacteriophage is a
(a) Bactrium (b) Protozoa (c) Virus (d) Fungus
 2. What is epistatis? Explain it with suitable example.
 3. Write short notes on any two of the following:
 - (a) Polyploidy (b) Hypoploidy
 - (c) Hyperploidy (d) Allopolyploids
 4. Describe different types and causes of chromosomal diseases in man.
 5. Describe briefly the polyploidy and its role in plant breeding.
 6. What is mutation? Discuss point mutation.
- Or
- Give an account of meiosis and explain its significance.
7. What is gene replacement therapy?
 8. Discuss the methods of germplasm conservation in brief.
 9. Write an essay on human genetics.
 10. Write short notes on any two of the following:
 - (a) Turner's syndrome (b) DNA Bank
 - (c) Polyploidy (d) Duplicate genes

Nalanda Open University
Annual Examination - 2011
B.Sc. Zoology (Honours), Part-III
Paper-V

Time: 3.00 Hrs.

Full Marks: 80/75

Answer any Five Questions. Question No.1 is compulsory. All Questions are of equal value.

1. Multiple choice questions:
 - (i) Essential amino acids come from:
(a) Food (b) Lipid (c) Rice (d) Carbohydrates
 - (ii) Which are of these amino acids has two NH₂ groups?
(a) Serine (b) Valine (c) Glycine (d) Lysine
 - (iii) Net gain of ATP during glycolysis is:
(a) Two (b) Four (c) Six (d) Eight
 - (iv) Keratin Protein is found in:
(a) Bone (b) Hair (c) Blood (d) Brain
 - (v) Collegen is a:
(a) Simple protein (b) Conjugated protein (c) Derived protein (d) Denatured protein
 - (vi) Lipid is made up of:
(a) Glycerol+Fatty acid (b) Wax+fatty acid (c) Glycerol+lactic acid (d) fats+oils
 - (vii) Which of the following is important in β -oxidation?
(a) Pyruvic acid (b) Glucose (c) Acetyl-CoA (d) Carbondioxide
 - (viii) Which is a fat soluble vitamin?
(a) Vit-A (b) Vit-K (c) Vit-D (d) Vit-B complex
 - (ix) Heart beat in vertebrate is:
(a) Neurogenic (b) Myogenic (c) Both (d) None of these
 - (x) Ultrafiltration occurs in:
(a) Glomerules (b) Renal tubules (c) Urinary bladder (d) Blood Capillaries
 - (xi) Orinithine cycle is concerned with:
(a) Digestion (b) Reproduction (c) Excretion (d) Respiration
 - (xii) Excretory organs have evolved to excrete mainly
(a) Water (b) Urea & Water (c) Salts (d) Nitrogenous wastes
 - (xiii) Pace maker influences:
(a) Contraction of pelvis (b) Heart beat rate
(c) Contraction of heart muscles (d) Blood flow in heart
 - (xiv) Urea is transported by
(a) Blood (b) Erythrocytes (c) Plasma (d) Leucocytes
 - (xv) Vitamin E stored in:
(a) Mitochondria (b) Microsomes (c) Both of above (d) None of these
2. Define and classify carbohydrates and give their functions.
3. What are Vitamins? Give the main functions of different kinds of Vitamins.
4. Give an account of Krebs cycle.
5. Give an account of digestion and absorption of carbohydrates.
6. What is amino acids? Classify them.
7. Give an account of the synaptic transmission of Nerve impulse.
8. Describe cardiac cycle.
9. What is lipids? Classify it write the biological functions of lipids.
10. Write notes on any two of the following:
 - (a) ECG (b) Pancreatic juice
 - (c) Bowman's capsule (d) Blood clotting factors

Nalanda Open University
Annual Examination - 2011
B.Sc. Zoology (Honours), Part-III
Paper-VI

Time: 3.00 Hrs.

Full Marks: 80/75

Answer any Five Questions. Question No.1 is compulsory. All Questions are of equal value.

1. Multiple choice questions:
 - (i) Diffusion of dissolved substance through semi permeable membrane is called:
(a) Dialysis (b) Osmosis (c) active transport (d) facilitated diffusion
 - (ii) The diffusion of gases:
(a) depends upon partial pressure of each gas (b) does not depend on type of gas
(c) does not depend on partial pressure of each gas (d) occurs only through pores.
 - (iii) Enzymes are synthesized in the cell by
(a) mitochondria (b) lysosome (c) Golgi complex (d) ribosomes.
 - (iv) Insulin is a
(a) carbohydrates (b) fat (c) protein (d) none
 - (v) Mutation which is fatal for the organism is known as:
(a) gene mutation (b) point mutation (c) lethal mutation (d) reverse mutation.
 - (vi) The Queen honeybee is:
(a) diploid (b) tetraploid (c) haploid (d) triploid
 - (vii) Variation in the morphology of individual chromosome is :
(a) haploidy (b) polyploidy (c) inversion (d) chromosomal aberration.
 - (viii) Polyploidy was discovered by:
(a) De Bary (b) Sann (c) Lutz (d) haberlansdt
 - (ix) Which is trisomic condition?
(a) $2n-1$ (b) $2n+1$ (c) $2n+2$ (d) $2n+3$
 - (x) Klinefelter's syndrome is due to:
(a) monosomy (b) nullisomy (c) triploidy (d) trisomy.
 - (xi) A polypeptide is assembled on a:
(a) DNA molecule (b) Nuclear membrane (c) nuclear pore (d) Ribosome
 - (xii) Lysosome was discovered by:
(a) Palade (b) Robertson (c) de duve (d) de vries.
 - (xiii) In DNA replication, the helix is unwound by which enzyme?
(a) Topoisomerase (b) Primase
(c) DNA Polymerase (d) Helicase
 - (xiv) Polyploidy means occurrence of:
(a) Haploid set of chromosomes (b) Diploid set of chromosomes
(c) more than two sets of chromosomes. (d) None of above.
 - (xv) Male honeybee is :
(a) Diploid (b) Tetraploid (c) Haploid (d) Triploid.
2. Give an account of active transport.
3. Give an account of Linkage and crossing over.
4. Describe structure and functions of cytoskeletal elements.
5. What are functions of DNA? Write in brief.
6. Write an essay on Parthenogenesis.
7. Give an account of cell secretion of pancreatic cell
8. Differentiate between any of two:-
 - (a) Ribosome and Dioxiribose Sugar.

(b) DNA and RNA.

(c) Lethal mutation and Point mutation.

9. Write an essay on Mendel's law.

10. Write notes on any two of the following:

(a) Fertilization.

(b) Kappa Particles.

(c) Genotype and Phenotype.

Nalanda Open University
Annual Examination - 2011
B.Sc. Zoology (Honours), Part-III
Paper-VII

Time: 3.00 Hrs.

Full Marks: 80/75

Answer any *Five* Questions. Question No.1 is compulsory. All Questions are of equal value.

1. Multiple choice questions:
 - (i) Sources of variation was explained by:
(a) Darwin (b) Lamarck (c) Hugo de Vries (d) Weismann
 - (ii) Discontinuous Variations are:
(a) Acquired characters (b) Mutation
(c) Essential features (d) Non-essential features.
 - (iii) Over production of individuals will lead to:
(a) Survival (b) Struggle (c) Great mutation (d) Increase in fitness
 - (iv) The expression "Survival of the fittest" was coined by:
(a) Lamarck (b) Oparin (c) Darwin (d) H.Speneer
 - (v) The book "Origin of Species" was published in:
(a) 1809 (b) 1858 (c) 1859 (d) 1956
 - (vi) Lamarck was best known for his theory of:
(a) Independent assortment of Chromosome. (b) Evolution through natural selection
(c) Inheritance of acquired characters. (d) All of above
 - (vii) The "Use and Disuse" principle was proposed by:
(a) Hugo de vries (b) Lamarck (c) Weismann (d) Darwin
 - (viii) Isolation of a segment of population may result in:
(a) Their extinction (b) Inbreeding (c) outbreeding (d) Dominance
 - (ix) Egg is fertilized but zygote is unviable due to:
(a) Gametic mortality (b) Zygote mortality
(c) Hybrid inviability (d) Hybrid sterility
 - (x) Which was the smallest horse?
(a) Hyracotherium (b) Epihippus (c) Meshippus (d) miohippus.
 - (xi) Human evolution originated in:
(a) Africfa (b) Java(c) France (d) China.
 - (xii) Which one is the closest relative of modern man today?
(a) Orangutan (b) Gorilla (c) Gibbon (d) Sinanthropus.
 - (xiii) Ramapithecus is a fossil recovered from:
(a) Shivalik Hills of India (b) Desert of Africa
(c) Germany (d) Java
 - (xiv) The modern horse appeared in:
(a) Eocene (b) Oligocene (c) Pliocene (d) Mesocene.
 - (xv) The era in which man diversified is:
(a) Coenozoic (b) Mesozoic (c) Palaeozoic (d) all.
2. Write an essay on fossil history of horse.
3. Give an account of Variation.
4. Write an essay on Darwin's concept of organic evolution.
5. What is isolation? Describe various premating and post-mating isolation mechanism.
6. What are different realnes of the world? Give an account of their boundaries.
7. Describe the peculiarities and fauna of Ethiopian region.
8. Give an account of theories and principles pertaining to animal distribution.
9. Describe the characteristics and fauna of Oriental region.
10. Write notes on any two of the following:
 - (a) Galapagos Island. (b) Helena Island
 - (c) Mutation (d) Somatic variation.

Nalanda Open University
Annual Examination - 2011
B.Sc. Zoology (Honours), Part-III
Paper-VIII

Time: 3.00 Hrs.

Full Marks: 80/75

Answer any *Five* Questions. All Questions are of equal value.

1. Describe the different functions of hormones secreted by pituitary gland.
2. Give an account of structure of Pancreas and add a note on the functions of hormone secreted by the Islets of Langerhans.
3. Describe the functions of different hormones secreted from adrenal gland.
4. Describe the fauna of Mesozoic era.
5. Describe the Chi-square test.
6. Discuss the merits and demerits of arithmetic mean.
7. Give an account of student's t-test.
8. Describe the different methods to determine the age of fossils.
9. Describe the hormones secreted from testes.
10. Write notes on any two of the following:

(a) Radio-carbon method.	(b) Cushing's disease
(c) Cenozoic era.	(d) Standard error.



Practical Schedule:

Practical Counselling Classes Programme of B.Sc., Part-III Zoology (Hons.), 2011 are given below: Venue: -4 th Floor, Biology Lab. Biscomaun Bhawan, Patna.			
Date	11 A.M. to 01 P.M.	01 PM to 03 PM	03.30 P.M. to 05.30 P.M
25.02.2011	Paper - I	Paper - I	Paper - I
26.02.2011	Paper - II	Paper - II	Paper - II
28.02.2011	Paper - III	Paper - III	Paper - III
01.03.2011	Paper - IV	Paper - IV	Paper - IV
Practical Examination Programme of B.Sc. Part-III Zoology (Hons.), 2011			
Date	Time 08 - 11 AM	Time 11.15 AM - 02.15 PM	Time 2.30 PM - 5.30 PM
03.03.2011	Paper - I	Paper - II	Paper - III
04.03.2011		Paper - IV	

Nalanda Open University
Annual Examination - 2011
BCA, Part-III
Paper-[XV (CS-68) - Computer Networks]

Time: 3.00 Hrs.

Full Marks: 80/75

Answer any FIVE questions .All questions carry equal marks.

1. (a) Explain which transmission mode (simplex, half duplex or full duplex mode) can be Compared to the following.
 - (i) A conversation through a mobile phone
 - (ii) Television/Radio
 - (iii) Conversation on Walky – Talky
- (b) Which OSI layer is responsible for the following?
 - (i) End to End reliable communication service
 - (ii) WWW
 - (iii) Fragmentation of a packet
 - (iv) Error control
 - (v) Compression/Decompression
2. Differentiate between the followings through examples.
 - (i) Baseband and broadband communication
 - (ii) Analog and Digital signal
 - (iii) Circuit switching and packet switching.
3. Explain the operation of a selective repeat protocol with the help of a diagram.
4. Draw the diagram for Header format of user-network interface of ATM network. Also explain the use of each field in it.
5. Explain the operation of a switch with the help of a diagram.
6. Explain how multiplexing can be applied on physical and transport layer?
7. Explain ISDN. Briefly describe three applications of ISDN.
8. Explain services provided by Data Link layer & Transport Layer.
9. Explain the concept of a remote procedure call with the help of a diagram.
10. List and explain factors for occurrence of congestion in a Network. Which layer is responsible for controlling congestion? How congestion can be controlled?

Nalanda Open University
Annual Examination - 2011
BCA, Part-III
Paper-[XVI (CS-69) - TCP/ IP Programming]

Time: 3.00 Hrs.

Full Marks: 80/75

Answer any FIVE questions .All questions carry equal marks.

1. (a) Name the address class of the following IPv4 addresses :
191.106.031.10
12.6.3.2
160.3.2.1
219.162.131.3

(b) What is the maximum capacity of datagram that can be carried by Internet Protocol?
Also, explain how IP datagram are deleted from the network.
2. Describe the mechanisms used by TCP for flow control.
3. Explain the working of DNS. Also, differentiate it with dynamic DNS.
4. What is meant by a Socket? Write the differences between active and passive sockets.
5. How does broadcasting differ with multicasting? What socket options need to be set to enable broadcasting and multicasting?
6. Which transport layer protocol ensures the reliability? Also, write the main mechanism that it uses to create a reliable connection.
7. What is HTTP? Explain any four methods used by HTTP for data transfer.
8. Explain the count-to-infinity problem related to distance vector routing with the help of an example.
9. Write the syntax along with parameters used by the following system calls:
 - (i) send ()
 - (ii) accept ()
 - (iii) shut down ()
 - (iv) inet_addr ()
 - (v) listen ()
10. What is the purpose of byte ordering in network communication? Also, write any three functions used for byte ordering.

Nalanda Open University
Annual Examination - 2011
BCA, Part-III
Paper-[XVII (CS-70) - Introduction to Software Engineering]

Time: 3.00 Hrs.

Full Marks: 80/75

Answer any FIVE questions .All questions carry equal marks.

1. Explain all the phases of SDLC. Does the role of System Analyst is confined to Analysis Phase. Comment.
2. Design a system for Insurance Company. Draw DFD's for the system till level-2 and also prepare the SRS document for the same. Clearly mention the assumption made if any.
3. Design an ER diagram for above system. Make assumptions if any. List all the Entities along with their attributes and relationship.
4. What is testing? Explain different types of testing?
5. What is risk management? Further, discuss the areas of risk that a software project Manager must address.
6. What is an Object Oriented Design? Discuss its advantages in developing a Software system.
7. Differentiate between coupling and cohesion. What are the various types of coupling?
8. What are CASE tools? What are various types of CASE tools? Discuss its benefits?
9. Explain different types of teams structure? Which team structure is the best?
10. Write short notes on:
 - (a) Validation and Verification.
 - (b) Software Maintenance.
 - (c) Principles of Software Engineering.

२०२०

: सिर्फ 8वें पत्र की परीक्षा की तिथि में परिवर्तन की सूचना :

नालन्दा खुला विश्वविद्यालय का षष्ठम दीक्षान्त समारोह, दिनांक-21.02.2011 को निर्धारित है, इसलिए आपके सिर्फ **18वें पत्र (CS-71)** की परीक्षा अब दिनांक-22.02.2011 को **03.30 बजे से 06.30 बजे तक सम्पन्न होगी** । सिर्फ **18वें पत्र (CS-71)** पत्र की परीक्षा की तिथि एवं समय में परिवर्तन किया गया है । शेष परीक्षा पूर्व निर्धारित कार्यक्रम के अनुरूप होंगी ।

Nalanda Open University
Annual Examination - 2011
BCA, Part-III
Paper-[XVII (CS-70) - Introduction to Software Engineering]

Time: 3.00 Hrs.

Full Marks: 80/75

Answer any FIVE questions .All questions carry equal marks.

1. Explain all the phases of SDLC. Does the role of System Analyst is confined to Analysis Phase. Comment.
2. Design a system for Insurance Company. Draw DFD's for the system till level-2 and also prepare the SRS document for the same. Clearly mention the assumption made if any.
3. Design an ER diagram for above system. Make assumptions if any. List all the Entities along with their attributes and relationship.
4. What is testing? Explain different types of testing?
5. What is risk management? Further, discuss the areas of risk that a software project Manager must address.
6. What is an Object Oriented Design? Discuss its advantages in developing a Software system.
7. Differentiate between coupling and cohesion. What are the various types of coupling?
8. What are CASE tools? What are various types of CASE tools? Discuss its benefits?
9. Explain different types of teams structure? Which team structure is the best?
10. Write short notes on:
 - (a) Validation and Verification.
 - (b) Software Maintenance.
 - (c) Principles of Software Engineering.

२०२०

: सिर्फ 18वें पत्र की परीक्षा की तिथि में परिवर्तन की सूचना :
नालन्दा खुला विश्वविद्यालय का षष्ठम दीक्षान्त समारोह, दिनांक-21.02.2011 को निर्धारित है, इसलिए आपके सिर्फ **18वें पत्र (CS-71)** की परीक्षा अब दिनांक-22.02.2011 को **03.30 बजे से 06.30 बजे तक सम्पन्न होगी** । सिर्फ **18वें पत्र (CS-71)** पत्र की परीक्षा की तिथि एवं समय में परिवर्तन किया गया है । शेष परीक्षा पूर्व निर्धारित कार्यक्रम के अनुरूप होंगी ।

Annual Examination - 2011
BCA, Part-III
Paper-[XVIII (CS-71)]

Time: 3.00 Hrs.

Full Marks: 80/75

Answer any FIVE questions .All questions carry equal marks.

1. (a) Find the roots of the equation $2x^3 + 5x^2 + 5x + 3 = 0$ using Regula-falsi Method.
(b) Determine an approximate root of the Equations $\cos x - xe^x = 0$ using secant method.
2. Solve the system of equations
 $16x_1 + 22x_2 + 4x_3 = -2$
 $4x_1 - 3x_2 + 2x_3 = 9$
 $12x_1 + 25x_2 + 2x_3 = -11$
 using Gauss Elimination method.
3. Solve the system of Equations
 $10x_1 - 2x_2 - x_3 - x_4 = 3$
 $-2x_1 + 10x_2 - x_3 - x_4 = 15$
 $-x_1 - x_2 + 10x_3 - 2x_4 = 27$
 $-x_1 - x_2 - 2x_3 + 10x_4 = -9$
4. Define Interpolation and find Lagrange's Interpolating Polynomial for the data. Hence obtain $f(2)$

x	0	1	4	5	6
f(x)	8	11	68	123	129

5. Using Newton's Backward Interpolation formula find the interpolating polynomial that approximates the function given by the following table:

x	3	5	7	9	
f(x)	6	24	38	108	

Hence find $f(7.5)$

6. Find $\frac{dy}{dx}$ and $\frac{d^2y}{dx^2}$ at $x = 1$ and $x = 0$ from the following data

x	0	2	4	6	8
y	7	13	43	145	367

7. State and Prove Trapezoidal Rule.
8. Using the third order Taylor's series method find the solution of the differential equation $xy^1 = x-y$, $y = 2$ at $x = 2$ taking $h = 1$
9. Using Euler's method $y^1 = 1-2xy$, $y(0.2) = 0.1948$. Find $y(0.4)$ with $h = 0.2$
10. Using Runge Kutta fourth order method

$$y^1 = \frac{y-t}{y+t}, y(0)=1$$

Find $y(0.5)$ taking $h = 0.5$

Nalanda Open University
Annual Examination - 2011
BCA, Part-III
Paper-[XIX (CS-72) - Introduction to C++]

Time: 3.00 Hrs.

Full Marks: 75

Answer any FIVE questions .All questions carry equal marks.

1. Create a class "My string". Write the following methods in this class to perform the actions mentioned:
 - (i) Reverse (): To display the reverse of the given input string.
 - (ii) String Len (): To display the length of the given string.
2. Write a program in C++, using recursion to find the factorial of a given number.
3. Write the syntax of the following in C++ and give an example for each:
 - (i) Do... While
 - (ii) Go To
 - (iii) BREAK.
4. What are nested classes? Explain with an example.
5. Write a program in C++ to illustrate the multiple inheritance concepts.
6. How is exception handling performed in C++? Write a program-segment that throws an arithmetic exception as and when an input number is greater than 9999.
7. Write a program in C++ to count the occurrences of each vowel in a given string.
8. With the help of a suitable example for each, explain the visibility modes (private, Public and protected).
9. Explain the concepts of function overloading and operator overloading with the help of an example.
10. Explain the following with their usage in C++ programming:
 - (i) Friend function.
 - (ii) Arithmetic If operator
 - (iii) Size of operator
 - (iv) Scope resolution operator
 - (v) Abstract class

SET-I

Nalanda Open University
Annual Examination - 2011
BCA, Part-III
BCA Part III [Paper XIX, CS-72 (C++)]

Time 3:00hrs

F.M – 100

Answer all questions.

1. Write a program in C++ to overload the '+' operator to concatenate two string variables using the simple expression $x3 = x1 + x2$ Where $x1$, $x2$ and $x3$ are three string objects. Make suitable assumptions, if any.
2. What is the difference between arguments passed by value or passed as reference? Explain the difference with the help of an example.
3. What are Templates? How are templates defined? Differentiate between class and function templates with the help of an example of each.
4. Explain different types of inheritance with example.
5. Write a program in C++ for implementing insertion in Linked List.

SET-II

Nalanda Open University
Annual Examination - 2011
BCA, Part-III
BCA Part III [Paper XIX, CS-72 (C++)]

Time 3:00hrs

F.M – 100

Answer all questions.

1. Write a program in C++ to implement function over-riding.
2. What is the difference between abstract class and virtual class? Implement them using an example.
3. What is inline function? How is inline defined? Differentiate between simple function and inline function.
4. Explain different types of inheritance with example.
5. Write a program in C++ for implementing insertion in a queue.

Nalanda Open University
Annual Examination - 2011
BCA, Part-III
Paper-[XX (CS-73, Theory of Computer Science)]

Time: 3.00 Hrs.

Full Marks: 80/75

Answer any FIVE questions .All questions carry equal marks.

1. Explain Regular expression with suitable examples. What are the rules for writing? Regular expression?
2. Explain Pushdown automata with suitable examples. Draw a PDA for an even Palindrome over $\{a, b\}^*$
3. What is Pigeon hole Principle? How it is used in Pumping Lemma? Show that the Language $L = \{a^n b^n \mid n > 0\}$ is not regular using Pumping Lemma.
4. For the following regular expression, construct equivalent finite automata:
 - (i) $11(01 + 10)^*01$.
 - (ii) $ab(ab^* + ba^*)bb$
 - (iii) $(00+11+10+01)$
5. Prove that regular languages are closed under Complementation, Intersection and Union with suitable examples.
6. Draw a Turing machine for sum function given as
$$F(m,n) = \begin{cases} m+n & \text{For } m=0, n=0. \\ m>0, n=0. \\ m=0, n>0. \\ m>0, n>0. \end{cases}$$
7. Define grammar .Explain Chomsky classification of grammar.
8. Write the production rule for the given Context Free Grammar:
 - (i) $L1 = \{a^m b^n c^m \mid m, n \geq 0\}$
 - (ii) $L2 = \{a^n \mid n \geq 0\}$
9. Write short notes on any three:
 - (i) Decidable and Solvable problem.
 - (ii) Complexity of Algorithm
 - (iii) Mealy and Moore machine
 - (iv) NULL NFA
10. Write and explain the applications of Theory of Computation with suitable examples.

Nalanda Open University
Annual Examination - 2011
Bachelor in Computer Application (BCA) Honours, Part-III
Paper-XXI (Introduction to Internet Programming) CS-74

Time: 3.00 Hrs.

For current batch: 80
For old batch: 75

Answer any five questions. All questions are of equal value.

1. Differentiate between nested and inner classes. Explain with an example.
2. Write a program for I/O operation using Buffered Input Stream and Buffered Output Stream that accepts user name, age and address from the user and displays it on the console.
3. Write an applet that reads two strings and displays the larger string among them.
4. What is run-time polymorphism? How does it differ from compile-time Polymorphism? Explain with an example.
5. What are threads? How can they be created?
6. Write a program in Java to generate the following output, using two-dimensional array:
a
a b
a b c
a b c d
7. What is the role of a default exception handler in Java? Differentiate between 'throw' and 'throws'.
8. Write a program that accepts two files as input and appends the content of first File to second file.
9. Write GUI Java application to simulate the simple calculator. The calculator should be able to do the basic operations.
10. Explain static methods and static variables in Java.



Nalanda Open University
Annual Examination - 2011
Bachelor in Computer Application (BCA) Honours, Part-III
Paper-XXII (Internet Administration) CS-75

Time: 3.00 Hrs.

For current batch: 80
For old batch: 75

Answer any five questions. All questions are of equal value.

1. List and explain any 10 benefits of Intranet to any organization.
2. What is a centralized database? How does it differ from a distributed database?
3. What is an IP address? Explain its significance. What is Wireless Application Protocol (WAP)? Briefly explain its layered architecture.
4. Explain the differences between two tier and three tier architectures.
5. Explain the roles played by Servers and Clients in an Intranet.
6. Describe any two Intranet Authoring tools in detail.
7. Explain the basis for any organization to decide that there is need for Intranet for it. List any two ways of securing Intranet.
8. What is a digital signature? How is it useful to provide authentication on Intranet/Internet? Explain the process of creation and authentication of a digital signature using a suitable example.
9. How is the Distributed mail system protocol different from Simple mail transfer protocol? Give suitable examples for each.
10. If a LAN has a subnet mask of 255.255.255.128, how many hosts are there per subnet? What is the use of a 0.0.0.0 address? What is multicasting?

