1. Explain the concepts of National Income.
2. Discuss the classical theory of employment. What are the assumptions of this theory?
3. Describe the multiplier theory of Keynes and throw light on the assumptions and criticisms of this theory.
4. Explain critically the classical theory of Interest.
5. Explain critically the over investment theory of Hayek.
6. Describe the economic and non-economic factors of growth. Which one of the two you consider more important? Give arguments.
7. Evaluate Solow's model of economic growth.
8. Define Saving and Investment. Briefly describe the viewpoints of prominent economists about saving and Investment. What is your opinion about equilibrium between saving and Investment?
10. Write notes on any two of the following:
    a) Leaks in Multiplier
    b) Consumption Function
    c) Induced and Autonomous Investment
Answer any Five Questions. All questions carry equal marks.

1. Throw light on the importance of index number. Describe the difficulties that arise in its preparation.

2. "Inflation is unjust while deflation is inexpedient but of the two deflation is worse." Discuss this statement.


4. Define Bank and describe its functions.

5. Explain the investment policy of a commercial bank.

6. Describe the merits and demerits of paper money.

7. What is branch banking? Explain its merits and demerits.

8. Explain the different principles of public expenditure.

9. Describe the characteristics of a good tax system. Point out the economic effects of taxation.

10. What is budget? What are its different types? Explain the procedures of preparation and passing of budget in India.
1. Explain the position of industries and handicrafts in India before British rule.

2. Write a short essay on the exploitation of India as a British Colony.

3. Describe the shortcomings of Indian agriculture. To what extent green revolution has been successful in removing these shortcomings? Do India need a second green revolution also?

4. Describe the importance of cottage and small scale industries. What measures have been taken by the government of India for their development? Do you consider these measures adequate?

5. Describe the salient features of an under-developed country. Is India an underdeveloped country? If yes, how?

6. What do you understand by industrial relation? By which factors it is affected? Explain the essential conditions for cordial relations between Labour and Management.

7. Throw light on the causes of unemployment and explain urban unemployment.

8. Throw light on the importance of foreign capital and discuss the role of foreign capital in India's economic development.

9. Describe the sources of agricultural finance.

10. Write notes on any two of the following:
    (a) National Income
    (b) Balance of payments
    (c) Inequalities
नालंडा ऑपन यूनिवर्सिटी
अन्नूल एम्यूजन - २०११
बी.ए. एच.टी. ग्रंथि (प्रतिक्षा), भाग-II
तृतीय भाग (व्यवस्था साहित्य)

किन्ही पृष्ठ प्रश्नों के उत्तर लिखिए। प्रत्येक पंक्ति से कम से कम दो प्रश्नों का उत्तर देना अनिवार्य है। सभी प्रश्नों के अंक समान हैं।

पंक्ति-क
1. ‘सेवासदन’ में व्यक्ति समस्याओं का उद्धार कीजिए।
2. ‘सुनन्दा’ उपन्यास के आधार पर जैनन्द्र के भाषा-शिक्षा पर प्रकाश दालिए।
3. ‘भूला ओरच’ में देहाती की आलम में होने वाले आलोचना-विवेचना और विवेचन की झाँकी है” - कथन की समीक्षा कीजिए।
4. हरिप्रसन्न किस उपन्यास का पत्र है? उसके चरित्र का विश्लेषण कीजिए।
5. फणिश्वरानाथ रेणु अथवा जैनन्द्र के व्यक्तवर्ण पर प्रकाश दालिए।

पंक्ति-ख
6. ‘ज्योतिर्लिंगी’ शीर्षक कहानी में सामाजिक परम्परा की एक दुखती रग पर उंगली रखी गई है।’” इस कथन की समीक्षा कीजिए।
7. ‘अचूत’ कहानी की मूल स्वविद्या की विश्लेषण कीजिए।
8. ‘छूटीवाली’ कहानी के कथानक की समीक्षा कीजिए।
9. ‘नमक का दर्शन’ कहानी में लेखक के व्यक्त विचारों पर प्रकाश दालिए।
10. निम्नलिखित पंक्तियों की समस्त व्याख्या कीजिए।
    (क) “किंतु पक्षपात और न्याय का मेल? जहां पक्षपात हो, वहाँ न्याय की कल्पना भी नहीं की जा सकती।”
    (ख) कुलवधु होने में जो महत्व है वह सेवा का है, न कि विलास का।
नलंदा ऑपन यूनिवर्सिटी
अनुसंधान परीक्षा - 2011
बी.ए.ई. हिंदी (प्रलिपिका), भाग-II
पात्रता पत्र (नाटक और निबंध)

किसी पौंड प्रश्नों के उत्तर लिखिए। प्रत्येक पौंड से कम से कम दो प्रश्नों का उत्तर देना अनिवार्य है। सभी प्रश्नों के अंक समान हैं।

पौंड-क (नाटक)
1. ‘अच्छे-नगरी’ नाटक के उद्देश्य पर विचार कीजिए।
2. ‘चन्द्रगुप्त’ नाटक के नारी-पात्रों का चारित्रिक परिचय दीजिए।
3. ‘अम्बाली’ नाटक की समीक्षा कीजिए।
4. हिंदी एकांकी के विकास पर प्रकाश डालिए।
5. निम्नलिखित पंक्तियों की समस्याओं का प्रतिक्रिया कीजिए:

(क) वेदना जब संगीत बन जाए, व्यथा जब रागिनी का रूप धारण करे, प्रेम की सार्थकता तब सिद्ध होती है।
(ख) एक हत्या हत्यारियों की सूचना देती है, दूसरी हत्यारियों को देवता बना डालती है।

पौंड-ख (निबंध)
6. भाषा-शैली की दृष्टि से ‘खजूर के पेड़’ की प्रश्नांकांतर स्पष्ट कीजिए।
7. ‘अशोक के फूल’ के उद्देश्य का स्पष्ट कीजिए।
8. ‘बसंत आ गया है’ निबंध का कट्टर स्पष्ट कीजिए।
9. पंक्ति निबंधों के आधार पर, आचार्य हजारीप्रसाद द्विवेदी की प्रश्नांकांतर स्पष्ट कीजिए।
10. समस्याओं का प्रतिक्रिया कीजिए:

(क) स्वर्गीय वस्त्रों धरती से मिले बिना मनोबधि नहीं होती।
(ख) मैं मनुष्य के नाश्चून की ओर देखता हूं तो कभी-कभी निराश हो जाता हूं।

उसकी भविष्य धार्मिक वृत्ति का जीवंत प्रतीक है। मनुष्य की पशुता को जितनी बार भी काट दो, वह मरना नहीं जाती।

क्रमक्रम
नालंदा ओपन यूनिवर्सिटी
टिमिया पत्र (हिंदी गाथा)

प्रश्नसेठ से कम से कम एक प्रश्न का चयन करें और कुल पॉइंट संक्षेपणों का उत्तर लिखिए। सभी प्रश्नों के अंक समान हैं।

खंड-1. (उपन्यास)
1. ‘पुरुष और नारी’ उपन्यास का कथानक प्रस्तुत कीजिए।
2. ‘सेवासदन’ के माध्यम से प्रमखंड समाज का क्या संदर्भ देना चाहते हैं? सशक्तिकृत उत्तर दीजिए।

खंड-2. (कहानी)
3. ‘अलंकारा’ कहानी में लेखक के उद्देश्य पर प्रकाश डालिए।
4. पटित कहानियों के आधार पर प्रमखंड की भाषा-शैली पर विचार कीजिए।
5. ‘बेटों वाली विचारा’ कहानी के मुख्य विचार पर प्रकाश डालिए।
6. निम्नलिखित अवतरणों का सम्रस्तंग व्याख्या कीजिए:
   (क) त्याग ही उसका आनन्द और त्याग ही उसका अधिकार है।
   (ख) मेरा भी जी ललचता है; लेकिन करें क्या, खुद केराह-चलें तो तुम्हारी रखा कैसे करें? यह कर्त्तव्य भी तो मेरे सिर है।

खंड-3. (नाटक)
7. ‘अंधर नगरी’ नाटक के कथ्य पर प्रकाश डालिए।
8. छुट्टीमानों का चरित्र विचारण कीजिए।

खंड-4. (निबंध)
9. ‘एक कुट्टा और एक मैना’ संस्मरण की विषयवाद पर उदाहरणों उदाहरण उदयविक डालिए।
10. पटित निबंधों के आधार पर आचार्य हजारीप्रसाद घटिवेदी के व्यक्तित्व पर प्रकाश डालिए।

नेतृत्व
चुल मान गर्नेछो छैन। प्रत्येक खण्ड से कम से कम एक प्रश्न का उत्तर देना अनिवार्य है।

सभी प्रश्नों के अंक समान हैं।

खण्ड-क.
1. 'कफ' कहानी का सारांश लिखिए।
2. 'संयत' ना आवे' में व्यक्त लेखक के विचारों पर प्रकाश डालिए।
3. रामबुड़ा बेनीपुरी के रेखाचित्र की विशेषताओं का उद्धारण कीजिए।
4. एकलक-कला की दृष्टि से ‘एक तोला अफीम’ की समीक्षा कीजिए।

खण्ड-ख.
5. निम्नलिखित में से किसी एक विषय पर निबंध लिखिए:
   (क) राष्ट्र में गुरु (ख) बेरोजगारी (ग) प्रयत न्युतक

खण्ड-ग.
6. निम्नलिखित मुहावरों एवं लोककथाओं का अर्थ लिखिकर वाक्यों में प्रयोग कीजिए।
   (क) हाथ खीचना (ख) कला अशर बैस बराबर (ग) पैर पकड़ना (घ) अपजल गगरी छलकत जाए
   (ङ) नाक बजाना (झ) अकेला चना भाड़ नहीं भीड़ सकता (ञ) कान पर झूँ मूं तक न रंगना (ट) खोदा पहाड़ लिकली चुहिया
   (ठ) छटी कसना (ड) यथा नाम तथा गुण।

7. कला के 'ने' चित्र के प्रयोग को सम्पूर्ण कीजिए।
8. निम्नलिखित वाक्यों को शुद्ध कीजिए।
   (क) ये कथन 'जीवन जीने की कला से लिया गया है।
   (ख) मालिक ने लगान बसूल कर ली।
   (ग) शरीर पर कई अंग होते हैं। (घ)छात्र कमर कसा बैठा है।
   (ङ) वह हैंसी से दाल गया। (झ)बहुते भारी भरकम भीड़ जमा थी।
   (ञ) इस बात के कहने में किसी को संकोच न होगा।
   (ट) मैंने एक वर्ष तक उनकी प्रतीक्षा देखी।
   (ठ) बच्चा खिलोने लेकर भागता हुआ घर आया।
   (ड) वास्तविकता में वह झाँसी है।
9. परिपत्र क्या है? परिपत्र लिखने की विधि को सोचाहरण लिखिए।
10. निम्नलिखित अवतरण का अंग्रेजी में अनुवाद कीजिए।
    प्रत्येक व्यक्ति के जीवन में एक उद्देश्य होना चाहिए। बिना उद्देश्य के मनुष्य केवल अपने खिलोने होने जा जाता है। वह उद्देश्याधीन होकर इतने ऊर्जा भतकता रहता है और अपने जीवन में कभी भी सकलता प्राप्त नहीं कर सकता। इसलिए मनुष्य को अपने जीवन का उद्देश्य निश्चित कर लेना चाहिए।
The importance of English, both as an international language and as a link language is now widely accepted. It is also well known that students belonging to the rural areas have problems in learning and speaking English. With the upswing in economic activities and with the service sector booming in the country, there is an explosion of opportunities available to persons at different levels of competence and skills.
प्रत्येक खंड से कम से कम दो प्रश्नों चयन करते हुए पूरे प्रश्नों के उत्तर लिखिए | सभी प्रश्नों के अंक समान हैं।

**खंड-एक.**
1. शुक्ल जी की शैली का संक्षिप्त परिचय दीजिए।
2. पीछू का चरित्र चित्रण कीजिए।
3. विद्यानिवास मिश्र का जीवन परिचय दीजिए।
4. ‘कुशिया’ के चरित्र की विशेषताओं का परिचय दीजिए।
5. निम्नलिखित अवतरणों का आशय स्पष्ट कीजिए:
   (क)“रंग बही सांवल है, लेकिन उसमें गड़े के सड़े पानी की मुर्मरी नहीं है, कलिंदी का कलकल-छलछल है, जिसके पूल पर कितने गोपाल बंधी टेंटे, कितने ही नंदलाल रासलीला का स्वनि देखते!”
   (ख)वसंत के अने के संकेत हमें उन्हीं अमराइयों से मिलेंगे जिनके भीतर से ‘जड़ता जाड़ विषय उर व्यापा’ से दिटरते हुए असंख्य जन झूंक रहें है।

**खंड-दो.**
6. निम्नलिखित विषयों में से किसी एक विषय पर 500 शब्दों में निबंध लिखिए:
   (1) वसंत क्रतु (2) जीवन का लक्ष्य (3) प्रयोग पुस्तक
7. निम्नलिखित मुहावरों का अर्थ लिखकर वाक्यों में प्रयोग कीजिए:
   (क) मूंढ मीठा करना (घ) छिट करना
   (ख) आखिर लाल करना (ड) पूला न समाना
   (ग) आखिर का तारा होना
8. कलात के ‘ने’ चित्र का प्रयोग कहाँ-कहाँ होता है?
9. निम्नलिखित वाक्यों को शुद्ध कीजिए:
   (क) एक पूलो का गुच्छ दो।
   (ख) वह गाने की धे-लड़ाइया गाती है।
   (ग) अनेकों किताबों विश्वरो पड़ी है। (घ) वह हंसी से टाल गया।
10. परिपत्र क्या है? परिपत्र लिखने की विधि को उदाहरण सहित लिखिए।
नालंदा विश्वविद्यालय
वृहद विज्ञान - इतिहास

एनआरके
सामान्य साहित्य - इतिहास

प्रत्येक खंड से कम से कम दो प्रश्नों चयन करें। पूर्ण पाँच प्रश्नों के उत्तर लिखिए। सभी प्रश्नों
के अंक समान हैं।

खंड-एक.
1. माधव का चरित्र-चित्रण कीजिए।
2. आचार्य शुक्ल की निबंध कला पर प्रकाश डालिए।
3. ‘वर्षत न आवे’ की भाषा पर विचार कीजिए।
4. ‘कुंभिया’ श्रींकं रेखाचित्र का सार लिखिए।
5. निम्नलिखित अवतरणों का आशय स्पष्ट कीजिए:
   (क) खून में जो कहीं बची बचाई किसानी बृहत है, उसमें नये काम के नये अनुभव के कोतुरल से मिलकर युद्ध शेत में ला खड़ा किया।
   (ख) अश्वालुता का यह रंग तरंग ही बदल गया। अर्थशास्त्र नष्ट की खासियत है।

खंड-दो.
6. निम्नलिखित विषयों में से किसी एक विषय पर 500 शब्दों में निबंध लिखिए:
   (1) होली का त्योहार (2) नौकरी पेशा महिलाएँ (3) सर्व शिक्षा अभियान
7. निम्नलिखित मुहावरों का अर्थ लिखकर वाक्यों में प्रयोग कीजिए:
   (क) हाथ के तोड़े उड़ना (घ) जान पर खेलना
   (ख) हाथ मलना (ड) ऑफ़ का तारा होना
   (ग) ऑफ़ तैरना
8. कल्म के ‘ने’ चिह्न का प्रयोग कहाँ-कहाँ होता है?
9. सचिवालय सहायक के रूप में छह सहायक के पद सुनित करने के लिए टिप्पणी लिखिए।
10. निम्नलिखित वाक्यों को शुद्ध कीजिए:
   (क) साहित्य और जीवन का धेर संबंध है।
   (ख) बच्चा खिलोना लेकर भागता हुआ घर आया।
   (ग) वहंभी भारी मरकम भीड़ जमा थी।
   (घ) हमलोग चाव पीयें हैं।
   (ड) भाई-बहन जा रही है।
नालंदा ओपन यूनिवर्सिटी
एन्नियाल एक्सामीनेशन - 2011
वी.एफ./वी.एफ.एससी.वी./वी.कॉम स्नातक (प्रतिष्ठा), पार्ट-II
हिंदी रचना - द्वितीय पत्र
[अहिंदी भाषा]

प्रत्येक खंड से कम से कम दो प्रश्नों का उत्तर लिखिए। सभी प्रश्नों के अंक समान हैं।

खंड-एक.
1. ‘साहित्य का स्वरूप’ निबंध का सार लिखिए।
2. बुधिया के चरित्र की विशेषताओं पर प्रकाश दालिए।
3. ‘बसंत न आये’ निबंध के प्रतिपाद्य पर प्रकाश दालिए।
4. रेखाचित्र की विशेषताओं का उल्लेख कीजिए।
5. निम्नलिखित अवतरणों का आशय स्पष्ट कीजिए: -
   बसंत के रोएँ-रोएँ रो उठते हैं, जब उसे लगता है कि अपनी सहकार मंजिलों से उसे
   तिलांजलि का कार्य लेना है। तो स्वागत-गान से क्या लाभ? तड़पते हुए को तड़पाने से
   क्या लाभ?

खंड-दो.
6. निम्नलिखित विषयों में से किसी एक विषय पर 500 शब्दों में निबंध लिखिए:
   (1) महंगाई (2) राष्ट्रीय एकता (3) हमारा लोगों दर
7. निम्नलिखित मुहावरों का अर्थ लिखकर वाक्यों में प्रयोग कीजिए:
   (क) श्री गणेश करना (घ) दान फेंकना
   (ख) उल्लु बनाना (ङ) बाल-बाल बचना
   (ग) आँख खुलना
8. कत्लों के ‘ने’ चिह्न का प्रयोग कहाँ-कहाँ होता है?
9. प्रारूपण के विभिन्न प्रकारों पर चर्चा कीजिए।
10. निम्नलिखित वाक्यों की शुद्धि कीजिए:
    (क) यह एक गीतों की लिखाव है।
    (ख) मलिक ने लगाने नस्ल लेना।
    (ग) रमा किताब नहीं लीटा दी।
    (घ) भन्नान के अनेकों नाम है।
    (ड) रमा भाल पकाई।

कक्षा: 2
1. Give an account of the Problems and Conquests of Iltutmish.

2. Evaluate the administrative reforms of Alauddin Khilji.

3. Examine the external and internal policies of Firoz Tughluq.

4. Trace the rise of Vijayanagar Empire and History of its different dynasties.

5. Describe Akbar’s early difficulties and conquests.


7. Give an account of the origin main features of Sufism and the main Sufi Saints of India.

8. Write an essay on the Turka-Afghan Architecture in India.

9. Explain the progress of Language and literature during Mughal period.

10. Write short notes on any Two of the following:

   (a) Religious Policy of Akbar

   (b) Causes of decline of Mughal Empire

   (c) Administration of Shivaji

   (d) Conquests of Jalaluddin Khilji
Nalanda Open University
Annual Examination - 2011
B.A. History (Honours), Part-II
Paper-III (History of India, 1206-1757)

Time: 3.00 Hrs.  FM: Current Batch-80/Old Batch-70

Answer any Five Questions. All questions carry equal marks.

1. "Iltutmish was the real founder of the Delhi Sultunate" comment.

2. Through light on military exploits and expansion of empire of Alauddin Khilji.

3. Give an estimate of Mohammad bin Tughluq as a ruler.

4. Examine the causes of war between Vijayanagar and Bahamani Kingdom and why was this empire declined?

5. Describe the Mughal-Afgan Contests. What were the effects of these contests in Indian History.

6. Analyse the administration of Akbar.

7. Explain the Rajput Policy of Mughals.

8. Write a brief essay on the origin, growth, main features and importance of Bhakti Movement.

9. Throw light on the life and achievements of Shivaji.

10. Write two short notes of the following:

   (a) Jalaluddin Khilji
      जलालुद्दीन खिलजी

   (b) Medieval Indian Society
      मध्यकालीन भारतीय समाज

   (c) Mansabdari System
      मनसबदारी प्रणाली

   (d) Art and Architecture during Mughal Period.
      मुग़ल काल का एवं स्थापत्य कला
1. Form an estimate of Iltutmish as an empire-builder and conqueror.
2. Give an estimate of the market control of Ala-uddin Khilji.
3. Assess the character and works of Sultan Muhammad bin Tughlaq.
4. Analyse the administration of Vijaynagar Empire.
5. Examine the administrative policy of Shershah Sur.
6. Critically explain the religious policy of Akbar.
8. Describe the social condition of India during Medieval India.
10. Write two short notes of the following:

(a) Balban's theory of kingship.
(b) Firoz Tughluq
(c) Expansion of Mughal Empire under Akbar.
(d) Causes of Bhakti Movement.
Time: 3.00 Hrs.  
FM: Current Batch-80/Old Batch-70

Answer any Five Questions. All questions carry equal marks.

1. Assess the nature and effects of the French Revolution.
2. Account for the causes of rise and downfall of Napoleon Bonaparte.
3. Analyse the problems, principles and settlement of the congress of Vienna.
4. Throw light on the causes, consequences and importance of July Revolution of 1830.
5. Make an assessment on the role of Bismark in the unification of Germany.
7. Write an essay on the origin and progress of socialism in Europe.
8. Examine the causes and consequences of the First World War.
9. Describe the internal and external policies of Mussolini in Italy.
10. Write two notes of the following:
    (a) Causes of the Industrial Revolution
    (b) Role of Philosophers in France Revolution
    (c) Hitler

Examination Programme, 2011
BACHELOR OF ART (Part-II) History (HONS)
For 090330001 to 090332500 Students

<table>
<thead>
<tr>
<th>Date</th>
<th>Paper</th>
<th>Time</th>
<th>Name of Examination Centre</th>
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<tr>
<td>27/2/2011</td>
<td>HONOURS PAPER – III</td>
<td>8.00 to 11.00 am</td>
<td>Nalanda Open University, Patna</td>
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<td>02/3/2011</td>
<td>HONOURS PAPER – IV</td>
<td>8.00 to 11.00 am</td>
<td>Nalanda Open University, Patna</td>
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<td>04/3/2011</td>
<td>(SUB.) (Economics - II)</td>
<td>3.30 to 6.30 pm</td>
<td>Nalanda Open University, Patna</td>
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<td>05/3/2011</td>
<td>(SUB.) (Social Work - II)</td>
<td>3.30 to 6.30 pm</td>
<td>Nalanda Open University, Patna</td>
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<td>07/3/2011</td>
<td>(SUB.) (Hindi - II)</td>
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<td>Nalanda Open University, Patna</td>
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<td>08/3/2011</td>
<td>(SUB.) (Sociology - II)</td>
<td>8.00 to 11.00 am</td>
<td>Nalanda Open University, Patna</td>
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<td>10/3/2011</td>
<td>(SUB.) (Geography - II)</td>
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<td>11/3/2011</td>
<td>(SUB.) (Tourism - II)</td>
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<td>Nalanda Open University, Patna</td>
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<td>12/3/2011</td>
<td>(SUB.) (Home Science - II)</td>
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<td>13/3/2011</td>
<td>(SUB.) (Psychology - II)</td>
<td>3.30 to 6.30 pm</td>
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<td>14/3/2011</td>
<td>(SUB.) (Pol. Sci - II)</td>
<td>8.00 to 11.00 am</td>
<td>Nalanda Open University, Patna</td>
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<tr>
<td>16/3/2011</td>
<td>Hindi 100 or Ur 50+Hn50</td>
<td>8.00 to 11.00 am</td>
<td>Nalanda Open University, Patna</td>
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</table>
1. Explain the meaning of Industrial Revolution. Throw light of its effects.

2. Evaluate the achievements of Napoleon Bonaparte as First Consul.

3. Give an account of the causes, consequences and importance of French Revolution of 1848.

4. Write an essay on the unification of Germany.

5. Analyse the salient features and importance of the second Reform Act of 1867.


7. What were the consequences of the First World War? Comment.

8. Account for the establishment and successes of Nazi Party under the leadership of Hitler in Germany.

9. Describe the establishment, aims and different organs of the United Nations Organization.

10. Write two notes of the following:
   (a) Unification of Italy
   (b) Mussolini
   (c) Lenin

**Examination Programme, 2011**

**BACHELOR OF ART (Part-II) History (HONS)**

For 090332501 to Last Students and All Old Students
Nalanda Open University
Annual Examination - 2011
B.A. History (Subsidiary), Part-II
Paper-II [(World History (1500-1945)]

Time: 3.00 Hrs. FM: Current Batch-80/Old Batch-70

Answer any Five Questions. All questions carry equal marks.

1. Explain the meaning of Renaissance. What were the causes of Renaissance?

2. Make an evaluation of the expansion and effects of Industrial Revolution.

3. Examine the contribution of Philosophers in French Revolution of 1789.

4. Account for the policies and functions of congress of Vienna.

5. Throw light on the unification of Italy.

6. Describe the causes and consequence of the First World War.

7. Write an essay on the contribution and functions of Lenin in Russia.

8. Discuss the rise of Nazism under the leadership of Hitler in Germany.


10. Write two notes of the following:
   (a) Napoleon Bonaparte
   (b) Function of League of Nations
   (c) Dr. Sun Yat Sen

Set-A
Nalanda Open University  
Annual Examination - 2011  
B.A. History (Subsidiary), Part-II  
Paper-II [(World History (1500-1945)]

Time: 3.00 Hrs.  
FM: Current Batch-80/Old Batch-70

Answer any Five Questions. All questions carry equal marks.

1. Analyse the nature and effects of Renaissance.
2. Define the meaning of Industrial Revolution. Why Industrial Revolution was started first in England?
3. Examine the domestic policy and foreign policy of Napoleon Bonaparte.
5. Describe the causes and consequences of the French revolution of 1789.
6. Throw light on the achievements and failures of The League of Nations.
7. Describe the contributions of Mustafa Kamal Pasha in the modernization of Turkey.
9. Explain the rise of Mussolini in Italy and his domestic policy.
10. Write two short notes of the following:
    (a) Decline of Feudalism in Europe
    (b) Cavour
    (c) Causes of the Russian Revolution of 1917
Answer any Five Questions. All questions carry equal marks.

1. Explain the meaning of Feudalism. Analyse the causes of decline of Feudalism in Europe.

2. Throw light on the importance and impacts of religious Reformation Movement.

3. Give an estimate of the achievements of Napoleon Bonaparte as First Consul.

4. what is Concert of Europe? Review the functions of the concert of Europe.


7. Account for the contributions of Dr. Sun Yat Sen in making of Modern China.

8. Thro light on the rise of Fascism in Italy.

9. Describe the modernisation of Japan.

10. Write any two notes of the following:

   (a) Effects of Renaissance on Art and Architecture.

   (b) Causes of the French Revolution

   (c) Failure of League of Nations.
Nalanda Open University
Annual Examination - 2011
B.A. Political Science (Honours), Part-II
Paper-III (Comparative Government and Politics)

Time: 3.00 Hrs.                                                                                         Full Marks: 70/80

Answer any Five Questions. All questions carry equal marks.

1. Distinguish between Comparative Government and Comparative Politics.
2. Describe traditional methods of study of comparative Politics.
3. Discuss the Judicial System of France.
4. Describe the role of political parties in the American political system.
5. Describe the salient features of the Constitution of China.
6. "The Prime Minister is the keystone of the cabinet arch". Discuss.
7. Describe the powers and functions of the President of France.
10. Examine the composition and powers of National People's Congress.
Nalanda Open University
Annual Examination - 2011
B.A. Political Science (Honours), Part-II
Paper-IV (International Politics)

Time: 3.00 Hrs.                                                                    Full Marks: 70/80

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

1. Discuss International Politics.
   अंतरराष्ट्रीय राजनीति की विवेचना कीजिए।

2. Define cold war and discuss its causes and effects.
   शीतलड़ाई की परिभाषा कीजिए तथा उसके कारणों एवं प्रभावों का वर्णन कीजिए।

3. Explain Kaplan's theory on International Politics.
   अंतरराष्ट्रीय राजनीति पर कैप्लन के सिद्धांत की व्याख्या कीजिए।

4. Discuss the achievements and failures of the SAARC.
   सार्क की उल्लम्बियों तथा असफलताओं की विवेचना कीजिए।

5. Discuss the composition, powers and functions of the Security Council.
   सुरक्षा परिषद के गठन, शक्तियों और कार्यों की विवेचना कीजिए।

6. Write an essay on South-South Cooperation.
   दक्षिण-दक्षिण सहयोग पर एक निबंध लिखिए।

7. Write an essay on New International Economic Order.
   नवीन अंतर्राष्ट्रीय आर्थिक व्यवस्था पर एक निबंध लिखिए।

8. Discuss the problems and prospects of India-Pakistan relations.
   भारत और पाकिस्तान के संबंधों की समस्याओं और संभावनाओं की विवेचना कीजिए।

9. Examine the features and importance of the third World in International Politics.
   अंतरराष्ट्रीय राजनीति में तृतीय विश्व की विशेषताओं और महत्व का परीक्षण कीजिए।

10. Write an essay on globalisation.
    वैश्विकीकरण पर एक निबंध लिखिए।
1. Define Comparative Politics and discuss its utility.
   तुलनात्मक राजनीति की परिभाषित कीजिए तथा इसकी उपयोगिता की विवेचना कीजिए।

2. Discuss the modern methods of comparative politics.
   तुलनात्मक राजनीति की आधुनिक पद्धतियों की विवेचना कीजिए।

3. Describe the growth of constitutionalism in America.
   अमेरिका में संविधानवाद के विकास का वर्णन कीजिए।

4. Describe the powers, function and position of British Prime Minister.
   ब्रिटिश प्रधान मंत्री की शक्तियों, कार्यों एवं पदस्थिति का वर्णन कीजिए।

5. Discuss the Emergency Powers of the President of India.
   भारत के राष्ट्रपति के संकटकालीन अधिकारों की विवेचना कीजिए।

6. "The American Senate is the strongest Second Chamber of the world." Explain.
   "अमेरिकी सेंट्र विषय का सबसे भारी राजनीतिक विश्वकोश है।" व्याख्या कीजिए।

7. Discuss Judicial Review in America.
   अमेरिका में न्यायिक पुनर्विलोकन की विवेचना कीजिए।

8. Discuss the working of political parties in the American Political system.
   अमेरिकी शासन व्यवस्था में राजनीतिक दलों के कार्यकरण का वर्णन कीजिए।

9. Discuss the nature and role of Pressure Groups in Britain.
   ब्रिटेन में दलाल समूहों की प्रकृति एवं भूमिका का वर्णन कीजिए।

10. Describe the main features of the procedure of constitutional Amendments in India.
    भारत में संविधानवाद संशोधन प्रक्रिया की प्रमुख विशेषताओं का वर्णन कीजिए।
Nalanda Open University
Annual Examination - 2011
B.A. Political Science (Subsidiary), Part-II
Paper-II (Comparative Government & Politics)

Time: 3.00 Hrs. Full Marks: Current Batch-80/Old Batch-70

Answer any Five Questions. All questions carry equal marks.

1. Discuss the meaning and scope of Comparative Politics.

2. Discuss traditional methods of Comparative Politics.


4. Elucidate powers and position of the British King.

5. Describe powers and functions of the President of India.

6. Critically examine the organization and powers of the British House of Lords.

7. Discuss the concept of 'Rule of Law' in England.

8. Discuss the British Party System.

9. Describe the role of pressure groups in the Indian Political System.

10. Discuss the procedure of amending the Constitution of America.
Nalanda Open University
Annual Examination - 2011
B.A. Political Science (Subsidiary), Part-II
Paper-II (Comparative Government & Politics)

Time: 3.00 Hrs. Full Marks: Current Batch-80/Old Batch-70

Answer any Five Questions. All questions carry equal marks.

1. Define comparative politics and discuss its nature.
   तुलनात्मक राजनीति की परिभाषित कीजिए तथा इसकी प्रकृति का विवेचन कीजिए।

2. Write an essay on Constitutionalism.
   संविधानवाद पर एक निबंध कीजिए।

3. Discuss the system analysis method of Comparative Politics.
   तुलनात्मक राजनीति की व्यवस्था विश्लेषण पद्धति की विवेचना कीजिए।

4. How is the President of America elected? Examine his powers.
   अमेरिका का राष्ट्रपति कैसे निर्वाचित होता है? उसकी शक्तियों की व्यक्ति कीजिए।

5. Describe the composition and powers of the Council of States.
   राज्यसभा के संगठन तथा शक्तियों का वर्णन कीजिए।

6. Describe the composition and powers of the House of Representatives in America.
   अमेरिका में प्रतिनिधि सभा के संगठन एवं शक्तियों का वर्णन कीजिए।

7. Describe the organization and jurisdiction of the Supreme Court in America.
   अमेरिका में सूची न्यायालय के संगठन तथा क्षेत्राधिकार का वर्णन कीजिए।

8. Discuss the party system of Britain.
   ब्रिटेन की दल-व्यवस्था की विवेचना कीजिए।

9. Describe the role of the pressure groups in Britain.
   ब्रिटेन में दबाव समूहों की भूमिका का वर्णन कीजिए।

10. How is the constitution of India amended? Discuss the procedures.
    भारत का संविधान किस प्रकार संशोधित होता है? प्रक्रियाओं की विवेचना कीजिए।
Nalanda Open University  
Annual Examination - 2011  
B.A. Political Science (Subsidiary), Part-II  
Paper-II (Comparative Government & Politics)  

Time: 3.00 Hrs.  
Full Marks: Current Batch-80/Old Batch-70

Answer any Five Questions. All questions carry equal marks.

1. Examine the nature and utility of Comparative Politics.  
तुलनात्मक राजनीति की प्रकृति तथा उपयोगिता की व्याख्या कीजिए।

2. Discuss in short different methods of Comparative Politics.  
संक्षेप में तुलनात्मक राजनीति की विभिन्न पद्धतियों की विविधता कीजिए।

3. Describe the salient features of Constitutionalism in India.  
भारत में संविधानवाद की महत्वपूर्ण विशेषताओं का वर्णन कीजिए।

4. Describe the powers and functions of the President of America.  
अमेरिका के राष्ट्रपति की शक्तियों एवं कार्यान्वयन का वर्णन कीजिए।

5. Describe the powers and position of the Prime Minister of India.  
भारत के प्रधानमंत्री की शक्तियों तथा पदाधिकार का वर्णन कीजिए।

6. Describe the composition and powers of the Lok Sabha.  
लोक सभा की संरचना तथा शक्तियों का वर्णन कीजिए।

7. Describe the organisation and jurisdiction of the Supreme Court of India.  
भारत के सर्वोच्च न्यायालय के संरचना तथा क्षेत्राधिकार का वर्णन कीजिए।

8. Write an essay on the working of Regional political parties in India.  
भारत में क्षेत्रीय राजनीतिक दलों के कार्यक्रम पर एक निबंध लिखिए।

9. Examine the role of pressure groups in the British political system.  
ब्रिटिश राजनीतिक व्यवस्था में दबाव समूहों की भूमिका का परीक्षण कीजिए।

10. Do you agree that the Constitution of India is rigid and flexible?  
क्या आप सहमत हैं कि भारत का संविधान कठोर तथा लचीला है?

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SET D
1. Evaluate the Survey method of Social psychology.

2. Describe the factors influencing socialization.

3. Describe Likert's method of attitude measurement.

4. Define prejudice. How can it be reduced?

5. What is leadership? Distinguish between Formal and informal leader.

6. Describe the positive determinants of group morale.

7. Describe the stages involved in public opinion.

8. Describe the impact of personality upon culture.

9. Describe the barriers to effective communication.

10. What do you mean by social power? Discuss its nature.
1. Discuss the causes of decline of structuralism as a system of psychology.

2. "Psychology has a long past but short history." Comment.

3. "John Dewey and James Angell were the founder of functionalism but Harvey Carr was its developers." Explain it.

4. Discuss the major points of distinction between functionalism and structuralism.

5. Critically evaluate the E.C. Tolman's Behaviourism.

6. Describe the antecedent factor of Behaviourism.

7. Discuss the contributions of Gestalt Psychology.

8. Critically examine the Jung's Analytical psychology.


10. Write short notes on the following:

(a) Id, Ego and Super ego

(b) Collective unconscious
1. Throw light upon the role of heredity in origin of abnormality.

2. Explain the statistical viewpoint of abnormality.

3. Distinguish between normal and abnormal.

4. Throw light upon the role of biological factors in the origin of abnormality.

5. Critically explain the psychodynamic model of abnormality.

6. Show the importance of psychological factors in abnormality.

7. Discuss the nature of mental disorder.

8. Describe the main symptoms of obsessive-compulsion neurosis.

9. Why Hysteria is called conversion neurosis? Throw light on its causes.

10. What do you mean by client-centered therapy? Describe its merit and demerits.
1. Discuss the relationship between Social philosophy and Sociology.

2. Why did Sociology emerge in France? Examine.

3. Evaluate the theory of Social Solidarity of Durkheim.

4. What is functionalism? Describe its principles and characteristics.

5. Evaluate Max Weber's theory of Bureaucracy.

6. Write a note on the importance of the concept of 'Lion' and 'Foxes' of V. Pareto.

7. Analyse the sociological contributions of G.S. Ghurey.

8. Give an account of the theory of Functionalism of Talcott Parsons.

9. Describe the contributions of Radhakamal Mukherjee to Indian Sociology.

10. Write short notes on any two of the following:
   (i) Mechanical Solidarity.
   (ii) Communist Manifesto
   (iii) Authority
   (iv) Suicide


Answer any Five Questions. All questions carry equal marks.

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

1. Evaluate the approaches to study Indian Society.

2. What do you understand by urbanization? Bring out difference between urbanization and urbanism.

3. What do you understand by the Scheduled Caste? Describe their major problems.

4. What is backward class? What are their problems?

5. Is population a problem in India? Explain.

6. Discuss the aspects of diversity in Indian society.

7. Joint Family in India is the basic and universal institution. Examine.

8. What is Social Class? What are its main characteristics?


1. What is social research? Discuss its steps.
   सामाजिक शोध क्या है? इसके चरणों की विवेचना करें।

2. What is the meaning of Hypothesis? Describe the forms of hypothesis.
   परिकल्पना का क्या अर्थ है? परिकल्पना के स्वरूपों का वर्णन करें।

3. Define scientific method. How far it can succeed in the study of social phenomena?
   वैज्ञानिक पद्धति की परिभाषा दें। सामाजिक घटनाओं के अध्ययन में यह कहीं तक सफल हो सकता है?

4. What is objectivity? What is its need in social studies?
   वस्तुव्यतिःरत्न क्या है? सामाजिक अध्ययन में इसकी क्या आवश्यकता है?

5. Analyse the thought of David Hume on empiricism.
   आनुभवविज्ञान पर डेविड हुम के विचारों का विश्लेषण करें।

6. Explain the relationship between research methodology and research Method.
   शोध प्रणाली और शोध विधि में सम्बन्ध बताएं।

7. Define observation. Explain its types.
   अवलोकन की परिभाषा करें। इसके प्रकार बताएं।

8. What do you understand by Data collection? Describe the advantages and disadvantages of
   techniques of data collection.
   तथ्य संकलन से क्या समझते हैं? तथ्य संकलन की विधियों के लाभ एवं हानियों का वर्णन करें।

9. What is sampling? Describe its nature and utility.
   प्रतिचयन क्या है? इसके स्वरूप और उपयोगिता बताएं।

10. Define social survey and discuss its different kinds.
    सामाजिक सर्वेक्षण की परिभाषा करें तथा इसके विभिन्न प्रकारों का विवेचन करें।

2. Discuss the main characteristics of Renaissance. Discuss the sociological significance of Art and literature in Renaissance.

3. August Comte wanted to make Sociology a positivistic science. Examine.

4. Explain the theory of Authority of Max Weber.

5. Evaluate the contributions of Dehrendorf to Sociology.

6. Explain class structure as propounded by Marx. Is it responsible for class conflict?

7. Analyse the characteristics of Functionalism.

8. Evaluate the Sociological contributions of George Simmel.


10. Write notes on any TWO of the following:

   (i) Industrial Revolution
   (ii) Social Action
   (iii) Conflict perspective
   (iv) Social Alienation
1. Has sociology emerged from social Philosophy? Describe.
2. Evaluate the contributions of Herbert Spencer and illustrate his Organismic conception of Society.
3. Describe the causes of Industrial Revolution.
4. Explain the difference between Mechanical Solidarity and Organic solidarity as propounded by Durkheim.
5. Evaluate the sociological contribution of Karl Marx in the context of Social change.
7. Explain the concept of 'Lion' and 'Foxes' propounded by Vilfredo Pareto in the context of Social change.
8. Give a brief account of the contributions of two Sociologists in conflict perspective.
9. Discuss the contributions of Talcott Parsons to Functionalism.
10. Write a note on Indian Sociologist Radhakamal Mukherjee.
Nalanda Open University
Annual Examination - 2011
B.A. Sociology (Subsidiary), Part-II
Paper-II

Time: 3.00 Hrs.                                                                                         Full Marks: 80/70

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

1. Sociology and Social Philosophy are complementary to one another. Explain.
समाजशास्त्र और सामाजिक दर्शन एक दूसरे के पूरक हैं। व्याख्या कीजिए।

2. Discuss Evolutionary theory of Herbert Spencer.
हर्बर्ट स्पेंसर के उद्ध समाजवादी सिद्धांत की विवेचना कीजिए।

3. Analyse Positivism as propounded by August Comte.
अगस्त कांट द्वारा प्रतिपादित प्राचीनवाद का विश्लेषण कीजिए।

4. Describe the concepts of Social Fact, division of Labour and Collective Representation as propounded by Durkheim.
दुर्क्हैम द्वारा प्रतिपादित सामाजिक तथ्य, श्रम विभाजन एवं सामूहिक प्रतिनिधित्व की अवधारणाओं का वर्णन कीजिए।

5. Give an account of Life Sketch of Max Weber and describe his methodology.
मेक्स वेरब का जीवन परिचय दीजिए तथा उनके पद्धतिशास्त्र का वर्णन कीजिए।

रॉबर्ट मर्टन के प्रकाशयत्न सिद्धांत का आलोचनात्मक मूल्यांकन कीजिए।

7. What do you understand by functionalism? Describe the postulates in structural functional analysis.
प्रकाशयत्न से क्या समझते हैं? संरचनात्मक प्रकाशयत्न विश्लेषण की मान्यताओं का वर्णन कीजिए।

8. Analyse the sociological contributions of Talcott Parsons.
टालकट पार्सन्स के समाजशास्त्रीय योगदानों का विश्लेषण कीजिए।

9. Write an essay on the emergence and growth of Sociology in India.
भारत में समाजशास्त्र के उदय एवं विकास पर एक निबंध लिखिए।

10. Write notes on any two of the following:
निम्नलिखित में से किन्हीं दो पर नोट्स लिखिए:
(i) Bureaucracy नौकरांशी
(ii) Social Solidarity सामाजिक संस्थापत्ता
(iii) Conflict संघर्ष
(iv) Lewis Coser लेवी कोजर
1. Analyse the relationship between community work and community organization in Social Work.

2. Discuss the history of community organization in India.

3. Examine the history of development of Social Welfare administration in India.


5. What is Social Action? Describe its strategies with example.


7. What do you understand by Infectious Disease? Describe in brief the different types of Infectious Disease.

8. Give a brief account of the Methods and Tools of data collection.

9. Give social and demographic analysis of the position of women in India.

10. Write notes on any two of the following:
    (i) Formal organization (आधूनिक संगठन)
    (ii) Unstructured organization (असंरचित संगठन)
    (iii) Women Empowerment (महिला सशक्तिकरण)
    (iv) Sampling (निर्देशन)
1. Explain the concept of family as a primary unit of Society.

2. Describe the traditional Indian principles related to family life education.

3. Describe the role of individual, family and community in family life education.

4. Define moral values and discuss the various theories of development of moral values.

5. Explain the concept of Sex health education. Why is Sex health Education important?

6. Evaluate the role of means of mass communication in sex health education.

7. Discuss the concept and meaning of youth and explain the factors that cause concern with regard to growth and development of youth.

8. Analyse the historical evolution of marriage.

9. Evaluate family Welfare Programmes in India.

10. Distinguish between Divorce and Separation and discuss causes of Separation.
1. Give a description of the Historical development of Case Work in India and the West.

2. When did Social Work begin in Britain? Give its brief history.

3. What is Interview? Discuss the purpose of interview in Social Case Work.

4. What do you understand by Environmental Degradation (disorder)? Describe its effects.

5. What is Social Case Work Practice? Narrate its characteristics.

6. Discuss the concept of Social Problem and describe the types of Social Problem.

7. Describe the inherent principles of Group Work Practice.

8. Discuss the stages of formation of Social Work Group.

9. Elaborate the concept of Social Policy and discuss the objectives and characteristics of Social Policy.

10. Write an essay on Social Defense in India.
Answer any **Five** Questions in all, selecting **three** from section 'A' and **two** from section 'B'. All questions carry equal marks.

**Section-'A'** (खण्ड 'अ')

1. Give a detailed account of structure of peninsular India.
2. Give an account of the various means of irrigation in India.
3. Give an account of the required geographical conditions for the cultivation of either wheat or sugarcane in India.
4. Describe the factors of localization and development of either sugar or iron & steel industry in India.
5. Give an account of the resource, production and distributions of coal in India.
6. Give an account of distribution of population in India.

**Section-'B'** (खण्ड 'ब')

7. Divide Bihar into physiographic units and discuss their salient features.
8. Divide Bihar into agricultural regions and discuss their salient features.
10. Give an account of the industrial regions of Jharkhand.
Answer any **Five** Questions in all, selecting **three** from Section 'A' and **two** from Section 'B'. All questions carry equal marks.

**Section-'A'** (खण्ड 'अ')

1. **Give an account of the characteristics of plantation agriculture.**

2. **Assess the food problem and mal nutrition situation of the world.**

3. **Describe salient features of industrial regions of developed countries.**

4. **Give an account of the industrial location theory of Weber.**

5. **Give an account of the international trade of Cotton.**

6. **Divide the world into major agricultural regions and discuss their salient features.**

**Section-'B'** (खण्ड 'ब')

7. **What is resource? Present a detailed classification of resource.**

8. **Classify the soils of the world and discuss their distributional pattern.**

9. **Give an account of the reserve, production and distribution of either coal or petroleum in the world.**

10. **Analyse geographical conditions favouring the development of fisheries in Northern Hemisphere.**

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**Hons. and Subsidiary Practical Schedule**

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**Practical Examination**

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

Section-’A’ (खण्ड ‘अ’)

1. Analyse geological formation and structure of Himalaya.
   हिमालय के भौगोलिक निर्माण एवं संरचना की व्याख्या कीजिए ।

2. Give an account of Soils of India.
   भारत की मृदा का विवरण दीजिए ।

3. Give an account of the geographical distribution of sugar cane cultivation of India.
   भारत में गन्ना की खेती के भौगोलिक वितरण का विवरण दीजिए ।

4. Give an account of the distribution of population in India.
   भारत में आबादी के वितरण का विवरण दीजिए ।

5. Describe the location and development of either iron & steel or cotton textile industry in India.
   भारत में लोहा एवं इंडस्ट्रील अथवा सूती वर्त उद्योग के स्थानीकरण तथा विकास का वर्णन कीजिए ।

6. Explain the production and distribution of iron ore in India.
   भारत में लोह-अयस्क के उत्पादन एवं वितरण का वर्णन कीजिए ।

Section-’B’ (खण्ड ‘ब’)

7. Divide Bihar into physiographic units and describe their salient features.
   बिहार की स्थलाकृति प्रदेशों में विभाजित कीजिए तथा उनकी स्वतंत्रता का वर्णन कीजिए ।

8. Write an essay on flood problem in Bihar.
   बिहार में बाढ़ की समस्याओं पर एक निबंध लिखिए ।

   झारखंड में जनसंख्या के वितरण का विवरण प्रस्तुत कीजिए ।

10. Divide Jharkhand into industrial regions and discuss salient features of each one.
    झारखंड को औद्योगिक प्रदेशों में विभाजित कीजिए तथा प्रत्येक की विशेषताओं का वर्णन कीजिए ।

Subsidiary Practical Schedule

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

Time: 3Hrs          Full Marks: 80/70

Answer any five Questions. All Questions carry equal marks.

1. उपचारात्मक पौष्णक आहार के वर्गीकरण की विवेचना कीजिए।
Discuss the classification of Therapeutic Diet.

2. स्वास्थ्य देखभाल के सामूहिक उपायम के एक निबंध लिखिए।
Write an essay on term approach to health care.

3. तन्र, तरल एवं सौम्य आहार की परिभाषित कीजिए तथा इनकी विशिष्ट विशेषताओं की विवेचना कीजिए।
Define Soft, Liquid and light Diet and discuss their specific features.

4. अल्यन्वार के कारण एवं लक्षणों की विवेचना कीजिए।
Discuss the etiological factors and Symptoms of under weight.

5. आहार नाल के रोगों की तथा आहार नाल के रोगों के लिए आहार व्यवस्था की विवेचना कीजिए।
Discuss diseases of Esophagus and dietary management for esophagus diseases.

6. आंत के अल्सर के कारण एवं लक्षणों की स्पष्ट कीजिए।
Explain etiological factors and symptoms of ulcerative Colities.

7. अतिसार के कारणों एवं प्रकारों का वर्णन कीजिए।
Describe causes and types of diarrhoea.

8. उच्च रक्त चाप के प्रकार एवं कारणों की विवेचना कीजिए।
Discuss types and factors of hypertension.

9. ह्वाई रोग के लक्षणों की विवेचना कीजिए तथा ह्वाई रोग के लिए आहार व्यवस्था का सुझाव दीजिए।
Discuss the symptoms of heart disease and suggest food composition for patients of heart disease.

10. बांतासिर के कारणों, लक्षणों एवं उपचार की विवेचना कीजिए।
Discuss causes, symptoms and treatment of Hemorrhoids.
Nalanda Open University
Annual Exam-2011,
BA/B.Sc., Home Science (Hons) Part-II
Paper-IV [Home Management]

Time: 3Hrs  Full Marks: 80/70
किन्हीं पॉंच प्रश्नों के उत्तर लिखिए। सभी प्रश्नों के अंक समान है।

Answer any five Questions. All Questions carry equal marks.

1. गृह व्यवस्था से आप क्या समझते हैं? इसके उद्देश्य तत्त्वों की विवेचना कीजिए।
What do you understand by Home Management? Discuss its motivating factors.

2. आयोजन से आप क्या समझते हैं? गृह-व्यवस्था में इसका महत्व बताएं।
What do you understand by planning? Describe its importance in home management.

3. “सुगुणी के आवश्यक गुण” पर एक निबंध लिखिए।
Write an essay on "Qualities of a Good Home Maker".

4. परिवार के मानवीय साधन कैनौं कैन से हैं? परिवारीक साधनों की विवेचनाओं की विवेचना कीजिए।
What are the human resources? Discuss the characteristics of family resources.

5. समय-व्यवस्थापन का प्रशिक्षा का उल्लेख कीजिए।
Describe the process of time-management?

6. कार्य सरलीकरण से क्या समझते हैं? इसके सिद्धांतों की विवेचना कीजिए।
What do you understand by work simplification? Discuss its principles.

7. किन्हीं दो पर टिप्पणी लिखिए:-
Write short notes on any two of the following:-
(a) Family Budget (पारिवारिक बजट)
(b) Saving and Investment (बचत एवं विनिवेश)
(c) Time Distribution and Equilibrium (समय का विभाजन एवं संतुलन)

8. घरेलू गतिविधियों पर एक निबंध लिखिए।
Write an essay on household activities.

9. कमरों के आयोजन से आपका क्या तालमेल है? कमरों के आयोजन करते समय ध्यान देने योग्य कारकों की विवेचना कीजिए।
What do you mean by planning of room? Discuss factors to be considered while planning of rooms.

10. आंतरिक सजावट की अवधारणा की विवेचना कीजिए तथा आंतरिक सजावट में कला के तत्त्वों, रंगों एवं अभिलेख के प्रयोग की व्याख्या कीजिए।
Discuss the concept of interior decoration and state the application of elements of arts texture and colour in interior decoration.

B.A./B.Sc. Home Science (Honours), Part-II (Counselling-cum-Practical Programme)

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<th>Roll No.</th>
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<td>24.03.2011 to 26.03.2011</td>
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Nalanda Open University  
Annual Exam-2011,  
BA/B.Sc., Home Science (Subsidiary) Part-II  
Paper-II [Human Development]  

Time: 3Hrs  
Full Marks: 80/70

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

1. गर्भ की विभिन्न अवस्थाओं की विवेचना कीजिए ।  
Discuss the different stages of labour.

2. गृह प्रसृति की तैयारियाँ करते समय किन-किन बातों पर ध्यान दिया जाना चाहिए ?  
आवश्यक सामग्रियों की एक सूची प्रस्तुत कीजिए ।  
What points should be kept in mind while making preparation for home confinement. Give a list of article required.

3. नवजात शिशुकाल की साधारण बीमारियों पर एक निबंध लिखें ।  
Write an essay on minor ailments of newborn child.

4. ‘दूध पूर्ण आहार है’ | विवेचन करें ।  
"Milk is perfect diet." Discuss.

5. बाल विकास के अध्ययन की उपयोगिता क्या है? इसका अध्ययन गृह-विज्ञान के अन्तर्गत क्यों किया जाता है?  
What is the use of study of child development? Why it is studied in Home Science?

6. शारीरिक विकास को प्रभावित करने वाले कारकों की विवेचना कीजिए ।  
Discuss the factor influencing physical development.

7. 0-1 वर्ष के बच्चों के शारीरिक तथा सामाजिक विकास का वर्णन करें ।  
Write about the physical and social development of children during 0-1 year.

8. सामाजिक विकास क्या है? सामाजिक विकास की विशेषताओं का वर्णन कीजिये ।  
What is Social Development? Describe the characteristics of Social Development.

9. भाषा विकास के महत्व को स्पष्ट कीजिए तथा नवजात शिशु के भाषा विकास की प्रभावित करने वाले कारकों का वर्णन कीजिए ।  
Explain the importance of language development and discuss the factors affecting language development of infant.

10. असाधारण बालकों से आप का क्या तात्पर्य है? असाधारण बालकों की आवश्यकताओं का विवेचन कीजिए ।  
What do you mean by exceptional children? Describe the need of exceptional children.
Nalanda Open University  
Annual Examination - 2011  
B.A. Tourism (Honours), Part-II


Time: 3.00 Hrs.  
Full Marks: 80/70

Answer any Five Questions. All questions carry equal marks.

1. Make an outline of domestic tourists on the basis of region, business and income. Is the development of International tourism possible with the development of domestic tourism?

2. Explain the meaning of Anthropology in tourism. Throw light on the significance of field work in the studies of Anthropology of tourism.

3. Write the history of Taj Mahal. Give an account of the importance of Taj Mahal in tourism industry.

4. Define Himalayan tourism and examine the development of Sherpas as guides.

5. Explain with the help of an example, the role of Dance Festival in attracting tourists to India.

6. Account for the different exciting games. Make an appraisal of the importance of exciting games in the development of tourism industry.

7. Discuss the role of religious places in tourism of India.

8. Describe the aims and achievements of Indian Festival organised in different countries.

9. Write an essay on the Kalinga-Bali Yatra.

10. What is Students International Association (SITA)? Analyse the organisational system of SITA.

किन्ही पाँच प्रश्नों के उत्तर लिखिए। सभी प्रश्नों के अंक समान हैं।
1. Examine the concept of social science procedure.
2. What is social change? Describe its importance.
3. What do you mean by Voluntary agencies? Delineate their importance with reference to India.
4. Discuss the contents of the Preamble of the Constitution of India.
5. Describe in brief the Fundamental Rights guaranteed under the Constitution of India.
6. Examine the concept of Democratic Decentralisation.
7. Describe the importance of Planning in the economic development of developing country like India.
8. What do you mean by Eco System? Also describe the factors responsible for destroying the Eco System.
9. Describe the importance of Scientific Temper. Also, examine the news of Jawahar Lal Nehru in this connection.
10. Write short notes on any two of the following:
    (a) The role of Nile, Euphrats and Tigris rivers in the development of early civilization.
    (b) Voluntary Agencies
    (c) Causes of the Revolt of 1857
    (d) Mukhia of a gram Panchayat
    (e) Patna Municipal Corporation

(or "Man occupies a Prime Place in the activities relating to social science areas". Comment.)
1. Define the word "Out line of tourists". Throw light on the main features of the "Out line of tourists" and its significance in tourism.

2. Write an essay on Sociology of Tourism.

3. Prepare a Tour Programme to travel historical places of a town.

4. Account for the main features of Taj Mahal. Describe the writings of European tourists related to Taj Mahal.

5. Analyse the importance of Museum in Tourism.

6. Make an appraisal of Mumbai as commercial and tourist spots city.

7. Describe the objective and achievements of India-Fest.

8. Explain the role of crafts and folk art in Tourism.

9. What do you understand by Heritage Hotel? Explain the features of a Heritage Hotel.

10. Mention the importance of National Highway Services in the field of Tourism.
Answer any Five questions, selecting at least one question from each Group-A, B and C. All questions are of equal value.

**Group-A (Microbiology)**
1. Describe the structure of Tobacco Mosaic Virus.
2. Describe the industrial importance of bacteria.
3. Describe the microbial degradation of agricultural produce.

**Group-B (Plant Pathology)**
4. What is infection? What are the various devices required for infection? Describe the role of phytoalexins in defence against pathogens in host.
5. What are toxins? Describe their role in pathogenesis.
6. What is late blight of potato? Write the symptoms, etiology and control of the disease.

Write short notes on any two of the following:
(a) Mycotoxins
(b) Incubation period
(c) Hypersensitive reaction
(d) Histological defence in host

7. Differentiate any two pairs of the following:
(a) Rust and Smut
(b) Autoecious and heteroeious
(c) Hypertrophy and atrophy
(d) Uredospore and Teleutospore

**Group-C (Embryology)**
8. Describe the process of pollen grain formation in Angiosperm.
10. Write short notes on any two of the following:
(a) Double fertilization
(b) Endosperm
(c) Induced parthenocarpy
(d) Germination of pollen grain on stigma

or

Write short notes on any two of the following:
(a) Glandular and Amoeboid tapetum
(b) Monosporic and bisporic
(c) Tetrahedral and isobilateral
(d) Successive division and simultaneous division of microspore mother cell
Nalanda Open University  
Annual Examination - 2011  
B.Sc. Botany (Honours), Part-II  
Paper-IV

Time: 3.00 Hrs.  
Full Marks: Current Batch-80/Old Batch-75

Answer any Five questions, selecting at least one question from each Group-A, B and C. 
All questions are of equal value.

**Group-'A'**

1. What is ecological adaptation? Give an account of anatomical characteristics of xerophytes.
2. Define periderm. Mention the function of different periderms.
3. Describe about the root-stem transition of Dicot Stem.

**or**

Write short notes on any two of the following:
(a) Lenticel  
(b) Bark  
(c) Phellogen  
(d) Phelloderm

**Group-B**

4. Describe the structure and function of Mitochondria.
5. Give an account of classification of lipids with examples.
6. Write short notes on any two of the following:
   (a) Nucleotide  
   (b) Function of carbohydrates  
   (c) Purines and pyrimidines  
   (d) Lysosome in plants

7. What are enzymes? Classify the enzymes and describe their properties.
8. What are secondary metabolites? Discuss their role.

**or**

Write short notes on any two of the following:
(a) Site of secondary metabolites  
(b) Alkaloids  
(c) Glucosides  
(d) Phenols

**Group-C**

9. Write the source of different kinds of plant fibres and their uses.
10. Name five important pulses that constitute our daily meal with their importance.

**or**

Write short notes on any two of the following:
(a) Spices  
(b) Sugar  
(c) Cinchona  
(d) Vitamins
1. What is mechanical tissue? Describe various types of mechanical tissue.

2. Describe microsporo genesis.

3. What is endosperm? Describe different types of endosperm.

4. Describe the detailed structure of plasmamembrane.

5. Describe the structure of nucleus of eukaryotic cell.

6. Give an account of mitotic cell division. Discuss its significance.

7. Define mutation. Describe different types of mutation.

8. Explain the mechanism of stomatal movement.
   OR
   Describe the Calvin Cycle.

9. Describe different components of an ecosystem.
   OR
   Write short notes on any two of the following.
   (a) Sclerenchyma
   (b) Double fertilization
   (c) Nucleolus
   (d) Sugar

10. Describe three oil yielding plants and uses of their oil.
    OR
    Write the use of any four of the following.
    (a) Ocimum sanctum
    (b) Saccharum officinarum
    (c) Gossypium herbaceum
    (d) Capsicum annuum
    (e) Oryza sativa
    (f) Coriandrum sativum
    (g) Coffeaarabica

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

1. What is retrogressive metamorphosis? Discuss with special reference to the life history of Herdmania.

2. Describe the structure and affinities of Branchiostoma.

3. Describe the respiratory system of Scoliodon.

4. Describe the general organization and affinities of Dipnoi.

5. Give an account of characters, distribution and classification of mammalia.

6. Describe the biting mechanism of a poisonous snake.

7. Give an account of Urinogenital system of Uromastix.

8. Write an essay on "Origin of Birds".

9. Describe the characteristic features, distribution and affinities of Prototheria.

10. Write short notes on any Two of the following:

   (a) Oral hood

   (b) Neoteny

   (c) Jacobson's organ

   (d) Echidina
Nalanda Open University  
Annual Examination - 2011  
B.Sc. Zoology (Honours), Part-II  
Paper-IV

Time: 3.00 Hrs.  
Full Marks: Current Batch-80  
Old Batch-75

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

1. Give an account of structure of integument of a fish, an amphia and a mammal.  
   or  
   Give an account of derivatives of integument of mammals.

2. Give an account of aortic arches of Amphia and compare it with that of Aves.

3. Describe the different types of cleavage patterns found in vertebrates.

4. Describe the structure of a Hen’s egg and explain the function of its various parts.

5. Describe the different types of placenta in mammals.

6. Describe in brief the development of brain in chick.

7. Describe the development of extra-embryonic membrane in chick embryo.

8. Describe the reptilian heart and compare it with that of a bird’s heart.

9. Give an account of urinogenital system of reptile (male) and compare it with that of a male pigeon.

10. Write short notes on any Two of the following:  
    (a) Contour feather  
    (b) Gastrulation  
    (c) Telolecithal  
    (d) Venous heart
Nalanda Open University  
Annual Examination - 2011  
B.Sc. Physics (Honours), Part-II  
Paper-III (Optics & Electromagnetic Theory)  

Time: 3.00 Hrs.  
Full Marks: Current Batch-80/Old Batch-75  

Answer **three** questions from Group 'A' and **two** from Group 'B'.  
All questions carry equal marks.  

**Group-A (Optics)**  
1. State and explain, with a suitable diagram, the construction and working of Michelson Interferometer. What are its uses? Explain how this instrument is used to measure the wavelength of light from a monochromatic source.  
2. Obtain, with necessary diagrams, the Fraunhoffer Diffraction pattern due to single slit. What is the angular width of its maxima?  
4. What is Rayleigh’s criterion for just resolution? Distinguish clearly between the resolving power and magnifying power of a telescope.  
5. Describe the construction and working of Babinet’s Compensator. How is it superior than a quarter wave plate?  
6. What is the basic principle of a laser? Discuss the construction and working of Helium-Neon laser.  

**Group-B (E.M. theory)**  
7. State the basic laws of electricity and magnetism in differential form and use these equations to write the four Maxwell’s equations. What is Maxwell’s displacement current?  
8. Obtain Poynting’s theorem for electromagnetic field. Also, give expressions for mechanical and electromagnetic momentum.  
9. Obtain Fresnel’s relations for reflection and refraction of plane e.m. waves at the interface of non-conducting media.  
10. Obtain Lorentz dispersion relation on the basis of Electromagnetic theory for dispersion in gases.
Nalanda Open University  
Annual Examination - 2011  
B.Sc. Physics (Honours), Part-II  

Paper-IV (Electrostatics, magnetism, current electricity & modern physics)  

Time: 3.00 Hrs.  

Answer any five questions. All question carry equal marks.  

1. Find the following quantities due to an electric dipole.  
   (a) Electric Potential at a point  
   (b) Electric field at a point  
   (c) Torque acting on dipole when placed in uniform Electric field.  
   Also, find the mutual potential energy of two dipoles.  

2. Find the electrostatic potential due to a uniform circular disc of charge 'q' and unit radius.  

3. Describe various methods for measuring strong magnetic fields.  

4. Define Thomson and Peltier coefficients. Show that, in a thermocouple AB, the total \( e.m.f. E \) is given by  
   \[
   E = \pi + \int_{r_i}^{r_f} (\sigma_A - \sigma_B) dT, \]
   where symbols have their usual meanings.  

5. Discuss the growth of charge and current in an LCR circuit when a direct \( e.m.f. \) has been applied.  

6. Describe the principle and working of Carey Foster's bridge. Also, discuss its usefulness.  


8. Write short notes on any two of the following.  
   (a) Nuclear fission  
   (b) Cyclotron  
   (c) Betatron.  

9. Find the expression for \( \nabla \lambda \) in Compton Effect. Explain why Compton Effect is experimentally not observed for visible light rays.  

10. What are elementary particles? Describe the most Common classification of elementary particles.
Answer any five questions. All questions carry equal marks.

1. Show that the energy density of electrostatic field $E$ in free space of permittivity $\epsilon_0$ is given by
   $$u = \frac{1}{2} \epsilon_0 E^2.$$ 
   An electron can be assumed to be a uniformly charged sphere having charge $e$ and radius $R$. Calculate the electrostatic energy of the electron.


3. Explain Peltier effect and define Peltier Coefficient. Derive the expression for this coefficient and explain how Peltier heating is different from Joule heating.

4. Describe, with a neat diagram, the construction and working of a moving coil ballistic galvanometer.

5. Give the theory of discharge of a capacitor through an inductance.

6. (a) Deduce the law of radioactive decay.
   (b) Give the theory, action and uses of a Cyclotron.

7. Describe Davisson and Germer experiment for the study of electron diffraction. What is Compton wavelength? Find its numerical value.

8. Give the theory of Newton's rings and show how can it be used to find $\lambda$ of sodium light.

9. Explain the construction and working of (i) quarter wave plate and (ii) half wave plate. Explain their use in different kinds of polarised light.

10. Write short note on any two of the following:
    (a) Nuclear models
    (b) Gas lasers
    (c) Maxwell's equations
    (d) Resolving Power of optical instruments.
Nalanda Open University
Annual Examination - 2011
B.Sc. Honours, Part-II
Zoology Subsidiary, Paper-II

Time: 3.00 Hrs. Full Marks: Current Batch-80
Old Batch-75

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

1. Describe the structure of Tadpole larva and add a note on retrogressive metamorphosis in Herdmania.
2. Describe the Respiratory system of Scoliodon.
   Or
   Describe the digestive system of Labeo robita.
3. Discuss the function of bile in the process of digestion and absorption of food.
4. Write an essay on "Flight adaptation in birds".
5. Describe the distribution and affinities of prototheria.
6. Discuss the structure of aortic arches of reptilia and compare it with that of mammalia.
7. Describe the development of placenta and its functions in mammal.
8. Describe the structure of different types of carbohydrates.
9. Describe the structure and function of Thyroid gland.
10. Write short notes on any **Two** of the following:
    (a) Oral hood
    (b) Placoid scale
    (c) Telolecithal
    (d) Gigantism
1. Write down the I.U.P.A.C. name of following complexes:
   (i) \([\text{Co}(en)\text{]}_3\text{Cl}_3\)  
   (ii) \([\text{Ni}(CO)\text{]}_4\)  
   (iii) \([\text{Na}_2[\text{PtCl}_4]\text{]}\)  
   (iv) \([\text{Ni}(\text{NH}_3)_6\text{]}^{2+}\)  
   (v) \([\text{K}_3[\text{Fe(CN)}\text{]}_6]\)  
   (vi) \([\text{Pt}(\text{NH}_3)_6\text{]}[\text{SO}_4\text{]}_2\)  
   (vii) \([\text{CO}(\text{NH}_3)_6\text{]}[\text{Co(CN)}\text{]}_6\)  
   (viii) \([\text{Co}(\text{NH}_3)_6\text{]}\text{Cl}_2\)  

2. What is Carnot Cycle? How the concept of entropy is deduced from it?
   Calculate the entropy change at 373K for transformation of water at 1atm to water vapour [Given - at 1atm \(\Delta H_{\text{vap}} = 40.668\text{KJmol}^{-1}\)].

3. What happens when
   (a) CO reacts with NaOH  
   (b) CO is passed over heated Nickel at 80ºC  
   (c) \(\text{SiO}_2\) reacts with HF  
   (d) \(\text{Sn}\) reacts with \(\text{HNO}_3\) with different concentration  
   (e) Carbon reacts when conc\(\text{HNO}_3\) 
   (f) Nickel chloride \(\text{Sln}\) is allowed to react with dimethyl glyoxime in presence of ammonium hydroxide  
   (g) \(\text{K}_2\text{Cr}_2\text{O}_7\) mixed \(\text{KCl}\) is heated with conc. \(\text{H}_2\text{SO}_4\)  
   (h) Hydrazoic acid reacts with acidified \(\text{KMnO}_4\) solution.

   or

   How does lead occur in nature? How is lead extracted from its ore Galena. How does it reacts with \(\text{HNO}_3\) and Sulphuric Acid.

4. Describe Millken's oil method to determine the electronic charge.
   or

   Describe Thomson method for the determination of \(\frac{e}{m}\) ratio, [where \(e\) and \(m\) is the charge and mass respectively of the electron].

5. How potassium permanganate is prepared on large scale from pyrolusite ore? Find out the equivalent of potassium permanganate in different medium (acidic or alkaline or neutral). How does it react with the following (a) Oxalic Acid (b) Potassium iodide in acid medium.

6. Write down in brief the preparation and properties of oxides and oxy-acids of phosphorous.

7. What do you mean by the term transition elements? How does the atomic size of transition metals decreases with the increase of atomic number in a series? Why the transition metals are usually paramagnetic and their compounds are coloured.

8. (a) What are the sources of soil pollution? How the soil pollution can be controlled?
    (b) Write short notes on
       (i) Photo-chemical smog (ii) aerosols

9. Discuss the position of halogen in the periodic table. How does atomic size, ionisation energy, electron affinity and electronegativity-vary from flourine to iodine?

10. Write short notes on any Two of the following:
    (a) Sodium Thiosulphate
    (b) Mass defect
    (c) Nuclear binding energy
    (d) Quantitative estimation of Nickel
Answer any Five questions. All questions are of equal marks.

1. Define and explain specific Conductance, Equivalent conductance and molar conductance. 
Describe an experimental procedure to determine conductance of a solution using meter bridge.

2. State and explain Kohlrausch law. What are the application of Kohlrausch law?

3. How is phenol commercially prepared from coaltar? In what respect does it differ from ethyl alcohol? How does phenol reacts with (a) HCHO/NaOH  
(b) CO₂/NaOH.

4. (a) Name the four type of structural isomerism and give one example in each case.
(b) Distinguish between D.N.A and R.N.A

5. (a) Describe any three methods for the preparation of $\alpha$ – amino acid. 
(b) Explain the following with reference to amino acid.
(a) Iso electric point  
(b) Zwitterion.

6. Describe electrophoresis or Cataphoresis. How the concept may be utilised in the purified of water.

7. How is benzen diazonium chloride prepared? Starting from benzenediazonium chloride how can you prepare.
(a) Phenyl hydrazino  
(b) Phenol  
(c) Bromobenzene.

8. Discuss the preparation of grignard reagent. Explain the use of the grignard reagent in preparing.
(a) alkane  
(b) primary alcohol  
(c) Secondary alcohol  
(d) tertiary alcohol  
(e) an aldehyde  
(f) Ketone  
(g) carboxylic acid.

9. How would derive the open chain structure of Fructose? What is the process of converting 
(a) Fructose in to glucose  
(b) Arabinose to glucose.

10. Write short notes on any Three of the following:
(a) Claisen reaction  
(b) Sand meyer reaction  
(c) Cannizzaro's reaction  
(d) Friedal - Craft reaction.
Nalanda Open University
Annual Exam-2011,
Bachelor of Science (Honours), Part-II
Chemistry Subsidiary, Paper-II

Time: 3Hrs Full Marks: 80

Answer any five questions. Question No. 1 is compulsory.

1. Choose the correct answer from the following statements (multiple choice of answers)
   (i) An atom with atomic number twenty one belongs to the
   (a) S - block Elements  (b) p - block elements
   (c) d - block elements  (d) f - block elements

   (ii) Transition metals are often paramagnetic owing to:
   (a) High melting point and high boiling points of these metals
   (b) Presence of vacant orbital in these metals
   (c) Presence of unpaired electrons in its orbital.
   (d) Presence of paired electrons in its orbital.

   (iii) Which of the ions give crimson red coloured flame in the flame test of qualitative
   analysis.
   (a) K⁺ ion  (b) Na⁺ ion  (c) Cu²⁺ ion  (d) Sr²⁺ ion

   (iv) The atomic number of copper is 29 (Twenty nine), its effective atomic number in
   \( [\text{Cu(NH}_3\text{)}_4]^{2+} \) ion will be
   (a) 35  (b) 36  (c) 49  (d) 40

   (v) Carbon atom in diamond are bonded with each other in configuration (geometry).
   (a) linear  (b) Tetrahedral  (c) Planar  (d) Octahedral

   (vi) Sodium thiosulphate (hypo) is used in photography for fixing negative because of its:
   (a) Oxidising property  (b) reducing property
   (c) complex forming behaviour  (d) reaction with light.

   (vii) Which of the following hydrogen halide is liquid at ordinary temperature.
   (a) HF  (b) HCl  (c) HBr  (d) HI

   (viii) What is the O.N. of central metal ion in \( K_4[\text{Fe(CN)}_6] \)
   (a) +2  (b) +3  (c) +1  (d) +6

2. What do you know about perdisulphuric acid (Marshall acid). Prepare it at least by two
   methods. Discuss its important properties and uses. Also write its structural formula.

3. How Potassium permanganate is prepared from pyrolusite? Give its reaction with
   (a) Oxalic Acid (b) ferrous sulphate (c) potassium iodide.

4. What do you understand by term transition elements? How do the size and ionisaton energy
   vary in the first transition series? Why does compounds of transition are generally coloured?

5. What is air pollution? What are the main sources of air pollution? How can these pollution be
   controlled?

6. Define the following terms used in the co ordination chemistry.
   (i) central metal ion  (ii) co-ordination number  (iii) ligands,  (iv) co-ordination entity.

7. What are important ores of chromium? Name them and also give their formula. How can
   chromium is obtained on large scale from its important ore? Discuss different oxidation state of
   chromium.

8. What are pesticides? What are the adverse effects of excessive use of pesticides to the soil?

9. (a) How magnesium is determined gravimetrically in a given sample.
   (b) How can you estimate copper volumetrically in any compounds or alloy of copper?

10. What is allotropy? Give the names of three non metals which exhibite allotropy. Why diamond is
    hard and non conductor of electricity but graphite is soft and good conductor of electricity?

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

Time: 3.00 Hrs. Full Marks: Current Batch-80/
Old Batch-75

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

Group-A

1. (a) Prove that $\sqrt{2}$ is not a rational number.
   
   (b) Define sum of two Dedekind cuts. Show that the sum of two cuts is also a cut.

2. (a) What do you understand by a closed set? Show that the union of any finite number of closed sets is closed.
   
   (b) By introducing the concept of neighborhood of a point. Prove that a set is open in $\mathbb{R}$ iff it is neighborhood of each of its points.

3. (a) Define uniform Continuity of a function. Show that $f(x) = x^2$ is uniformly continuous on $[-1,1]$.
   
   (b) Prove that, if $f$ is Continuous on $[a,b]$ and $f(a)$, $f(b)$ have opposite signs, then there exists a point $c \in [a, b]$ such that $f(c) = 0$.

4. (a) A function $f$ is defined as follows
   
   $f(x) = \begin{cases} 
   \frac{1}{x}, & x \neq 0 \\
   0, & x = 0 
   \end{cases}$

   What conditions should be imposed on $p$ so that $f$ becomes differentiable at $x = 0$?
   
   (b) State and prove Rolle's Theorem.

5. (a) Prove that $\beta(m, n) = \frac{\Gamma(m)\Gamma(n)}{\Gamma(m + n)}$
   
   (b) Test the validity of application of Lagrange's Mean Value Theorem for the function $f(x) = ax^2 + bx + c$.

   Hence or otherwise compute the value of $\theta$ used in the Lagrange's Mean Value Theorem.

Group-B

6. (a) Prove that, every bounded monotonically increasing sequence Converges to its least upper bound.
   
   (b) Show that the sequence $(a_n)$ defined by

   $a_n = \sqrt{n + a} - \sqrt{n}$, $n \in \mathbb{N}$, is convergent and its limit of Convergent is zero.

7. (a) Test the Convergence and divergence of the series

   $\frac{1}{1^p} + \frac{1}{2^p} + \frac{1}{3^p} + \ldots + \frac{1}{n^p} + \ldots \ldots \ldots \to \alpha$

   (b) Test the nature of the series

   $1 + \frac{1}{2^2} + \frac{2^2}{3^2} + \frac{3^3}{4^4} + \ldots \ldots + \frac{(n - 1)^{n-1}}{n^n} + \ldots \ldots \ldots \to \alpha$

[P.T.O.]
8. (a) State and prove Cauchy’s Condensation Test.
(b) Examine the convergence of the series
\[
\frac{2^2}{3^2} + \frac{2^2 \cdot 4^2}{3^2 \cdot 5^2} + \frac{2^2 \cdot 4^2 \cdot 6^2}{3^2 \cdot 5^2 \cdot 7^2} + \ldots \ldots \ldots \text{to } \alpha
\]

9. (a) Prove that the sum of an absolutely convergent series is independent of the rearrangement of terms.
(b) Prove that the series \( d_1 x^2 - d_2 x^3 + d_3 x^4 - \ldots \ldots \text{to } \alpha \), where \( d_n = \frac{2}{n+1} \left( 1 + \frac{1}{2} + \frac{1}{3} + \ldots + \frac{1}{n} \right) \), is an absolutely convergent series for \(|x| < 1\).

**Group-C**

10. (a) Define a sub-space of a vector space. Prove that a necessary and sufficient condition for a non-empty subset \( W \) of a vector space \( V \) over the field \( F \), is a sub-space of \( V \), are (i) \( x \in W, y \in W \Rightarrow x - y \in W \) and (ii) \( a \in F \) and \( x \in W \Rightarrow ax \in W \).
(b) If a vector space is the set of real valued continuous function over \( R \), then show that the set \( W \) of solutions of the differential equation \( 2 \frac{d^2 y}{dx^2} - 9 \frac{dy}{dx} + 2y = 0 \) is a sub-space of \( V \).

11. (a) Define finite dimensional vector space. Prove that any two bases of a finite dimensional space have the same number of elements.
(b) Prove that the set \( \{1,2,1,2,1,0,1,2\} \) forms a basis of \( V_3(R) \).

12. (a) State and Prove Cayley-Hamilton Theorem.
(b) Prove that the map \( T: V_4(R) \rightarrow V_1(R) \) defined by
\[
T(a,b,c,d) = (a - b + c + d, a + 2c - d, a + b + 3c - 3d)
\]
where \( a,b,c,d \in R \), is a linear transformation. Hence, find the nullity of \( T \).
Nalanda Open University  
Annual Examination - 2011  
B.Sc. Mathematics (Honours), Part-II  
Paper-IV  

Time: 3.00 Hrs.  
Full Marks: Current Batch-80  
Old Batch-75

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

**Group-A**

1. (a) Solve any two of the following:

   (i) \( y = (1 + p)x + ap^2 \)  
   (ii) \( y = px + p - p^2 \)  
   (iii) \( xyp^2 - (x^2 - y^2)p - xy = 0 \)

   (b) Show that the system of parabola \( y^2 = ya(x + a) \) is self-orthogonal.

2. Find the general solution of any two of the following:

   (i) \( \frac{d^2y}{dx^2} + 4y = \sin 2x \)  
   (ii) \( \frac{d^2y}{dx^2} - \frac{dy}{dx} + y = x^3 \)  
   (iii) \( \frac{d^2y}{dx^2} + \frac{dy}{dx} = x^2 \cos 2x \)

3. (a) Use variation of parameter to solve

   \[ \frac{d^2y}{dx^2} + a^2y = \sec ax \]

   (b) Solve \( \frac{d^2y}{dx^2} - 4x \frac{dy}{dx} + (4x^2 - 3)y = e^{x^2} \)

**Group-B**

4. (a) Give the geometrical meaning of scalar triple product of Vectors and hence derive the condition for the Co-planarity of three Vectors.

   (b) Prove that \( \vec{a} \times (\vec{b} \times \vec{c}) + \vec{b} \times (\vec{c} \times \vec{a}) + \vec{c} \times (\vec{a} \times \vec{b}) = 0 \)

5. (a) Give the Physical meaning of divergence and curl of a Vector function.

   (b) Prove the following

   (i) \( \nabla (\vec{r} \times \vec{r}) = 2 \vec{r} \)  
   (ii) \( \nabla \left[ \text{div} \left( \frac{\vec{r}}{r} \right) \right] = -\frac{2}{r^3} \vec{r} \).

6. (a) State and prove Gauss' Divergence Theorem.

   (b) Apply Green's Theorem to evaluate.

   \[ \int_C \left[ (2x^2 - y^2)dx + (x^2 + y^2)dy \right], \]  

   where \( C \) is the Curve formed by \( x- \) axis and the semi-circle \( y = \sqrt{1 - x^2} \)

**Group-C**

7. (a) Prove that any system of forces, acting in a plane upon a rigid body can be reduced to either a single force or a single couple.
(b) Three forces $P$, $Q$, $R$ act along the sides of a triangle formed by lines $x + y = 1$, $y - x = 1$ and $y = 2$. Find the equation of the line of action of the resultant.

8. (a) Prove that the tension of a string or rod may be omitted in forming the equation of virtual work.
(b) A regular hexagon ABCDEF consists of six equal rods each of weight $w$ and are freely jointed together. The hexagon rests in a vertical plane and AB is in contact with a horizontal table. If C and F are connected by a light string, prove that its tension is $w \sqrt{3}$.

9. (a) Define central axis of any given system of forces and find its equation.
(b) A uniform beam of length $\ell$ rests with its ends on two smooth planes which intersect in a horizontal line. If the inclination of the plane to the horizontal are $\alpha$ and $\beta$ ($\beta > \alpha$). Show that the inclination $\theta$ of the beam to the horizontal in one of the equilibrium positions, is given by $\tan \theta = \frac{1}{2} (\cot \alpha - \cot \beta)$.

Group-D

10. (a) A particle moves in a straight line OA with an acceleration which varies as the distance from a fixed point O in the straight line and is always away from the fixed point. If the particle was initially at 'a' distance from O and projected with the velocity $V$ towards O. Discuss the motion.
(b) State Hooke's law. Use this law to prove that the work done against the tension in stretching a light elastic string is equal to the product of its extension and the mean of initial and final tensions.

11. (a) Derive the formulae for radial and transverse velocities and accelerations.
(b) At an instant the Velocity of the projectile be $u$ and its direction of motion is making $\alpha$ with the horizontal, then show that it will be moving at right angles to this direction after time $\frac{u}{9 \sin \alpha}$.

12. (a) Describe the motion of a particle on a smooth curve in the vertical plane.
(b) If $V_1$ and $V_2$ are the velocities of a planet when it is respectively nearest and farthest from the sum, then prove that $(1-e)V_1 = (1+e)V_2$. 

\text{[ P.T.O ]}
Nalanda Open University
Annual Examination - 2011
Bachelor of Science Honours, Part-II
Mathematics Subsidiary (Paper-IV)
(Integral Calculus, Differential Equations, Co-ordinate Geometry, Linear Programming)

Time: 3.00 Hrs. Full Marks: Current Batch-80
Old Batch-75

Answer any Eight questions, selecting at least one question from each group.

Group-A

1. Evaluate any two of the following integrals:

   (a) \[ \int \frac{dx}{(1 + x^2)\sqrt{1 - x^2}} \]

   (b) \[ \int \frac{dx}{(1 + x)(1 + 3x + x^2)} \]

   (c) \[ \int \frac{x}{a-x} \]

2. (a) Evaluate the following definite integral as a limit of sum:

   \[ \int_{a}^{b} \cos 2x \, dx \]

   (b) Evaluate \( \lim_{n \to \infty} \left[ \frac{n^2}{(n^2 + 1)^{1/2}} + \frac{n^2}{(n^2 + 2)^{1/2}} + \ldots + \frac{n^2}{(n^2 + n)^{1/2}} \right] \)

3. (a) \[ \int \frac{\sin 2x \, dx}{\sin^2 x + \cos^4 x} \]

   (b) Find the reduction for \( \int \sec^n x \, dx \)

4. (a) Find the perimeter of the loop of the folium of Descarte \( x^3 + y^3 - 3axy = 0 \).

   (b) Evaluate \( \int\int_{R} \frac{xy}{\sqrt{1 - y^2}} \, dxdy \) over the first quadrant of the circle \( x^2 + y^2 = 1 \).

5. Solve any two Differential equation among the D.E

   (a) \( xyp^2 - (x^2 - y^2)p - xy = 0 \) \hspace{1cm} (b) \( \left( \frac{dy}{dx} \right)^2 + y \frac{dy}{dx} = x^2 + xy \) \hspace{1cm} (c) \( y = 2px + p^2 \).

6. (a) Find the orthogonal trajectories of the family of curves \( r^n \sin n\theta = a^n \)

   (b) Describe the method of construction of the orthogonal trajectory of system of curves given by \( f(x, y, c) = 0 \).

7. Solve any two of the following Differential equations.

   (a) \( \frac{d^2 y}{dx^2} - 3 \frac{dy}{dx} + 2y = \cos 3x \) \hspace{1cm} (b) \( \frac{d^2 y}{dx^2} - 2 \frac{dy}{dx} + y = x \sin x \) \hspace{1cm} (c) \( \frac{d^2 y}{dx^2} + 4y = \sin 2x \)

Group-B

8. (a) Derive the condition for the tangency of a line
\[ \frac{x-x_1}{l} = \frac{y-y_1}{m} = \frac{z-z_1}{n} \] to the sphere \( x^2 + y^2 + z^2 + 2ux + 2vy + 2wz + d = 0 \)

(b) Show that the plane \( 2x - y - 2z = 16 \) touches the sphere \( x^2 + y^2 + z^2 - 4x + 2y + 2z - 3 = 0 \).

9. (a) Define a cone. Hence, find the equation of the cone whose base curve is \( \frac{x^2}{4} + \frac{y^2}{9} = 1 \) in the plane \( z = 7 \) and the vertex at the origin.

(b) Find the condition that the plane \( lx + my + nz = 0 \) be tangential to the cone \( ax^2 + by^2 + cz^2 + 2fyz + 2gxz + 2hxy = 0 \).

10. (a) Define a hyper plane in \( \mathbb{R}^n \) and show that a hyper plane is a convex set.

(b) Introduce the concept of convex function. Let \( f(x) \) be a convex function on a convex set \( S \). If \( f(x) \) has a local minimum on \( S \), then prove that this local minimum is also a global minimum on \( S \).

11. What do you mean by the Convex Combination of Vectors in \( \mathbb{R}^n \)? Prove that any point on the line segment joining two points in \( \mathbb{R}^n \) can be expressed as a convex combination of two points.

**Group-C**

12. (a) If all the forces in a coplanar system are rotated about their point of application through the same angle in their own plane, then prove that their resultant passes through a fixed point in the body.

(b) equation to the line of action of the resultant.

13. (a) A heavy rod \( AB \) rests with its end on two smooth inclined planes which face each other and inclined at an angle \( \alpha \) and \( \beta \) to the horizontal. The Centre of gravity of the rod divides it into points \( A \) and \( B \). Find the inclination of the rod to the horizontal and the reaction of the planes.

(b) State and prove the principle of virtual work.

14. (a) Establish the principle of conservation of angular momentum of the particle.

(b) A bullet of mass 'm' moving with velocity \( v \) and strikes a block of mass \( M \) which is free to move in the direction of motion of the bullet and is embedded in it. Show that a portion \( \frac{M}{m+M} \) of K.E is lost due to collision.

15. (a) State the principle of energy and derive the famous formula by use of Vector method.

(b) A shell of mass 'm' is fired from a gun of mass \( M \), which can recoil freely on a horizontal plane and the elevation of the gun is \( \alpha \). Prove that the angle of projection of the shell is \( \tan^{-1}\left(1 + \frac{m}{M} \tan \alpha \right) \).

16. (a) Prove that the resultant of compounding of two simple harmonic motions along the same straight line, is a S.H.M. along the same line with the same time period.

(b) A particle, whose mass is \( m \), is acted upon by a force \( mu \left( x + \frac{a^4}{x^3} \right) \) towards the origin. If it starts from the rest at a distance 'a', show that it will arrive at the origin in time \( \frac{\pi}{4\sqrt{u}} \).
Nalanda Open University  
Annual Exam-2011,  
Bachelor of Commerce, Hons, Part-II  
Paper-III [Specialized Account (विशेषज्ञता लेखांकन)]

Time: 3Hrs                                                                                                                Full Marks: 80/70

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

1. सौंदर्यम व्यभि है? सौंदर्यम की दशा में कौन एवं विकेटेम कंपनियाँ की पुस्तक में जरूर की कीं सी प्रविष्टियाँ
   की जाती है?

   What is Absorption? What Journal entries are passed in the books of the purchasing and
   vendor company under Absorption?

2. वाहाय पुनर्निर्माण व्यभि है? आल्त्तरिक पुनर्निर्माण से यह किंत प्रकार बिन्न है?

   What is External Reconstruction? How does it differ from Internal Reconstruction?

3. एक वैकल्पिक कंपनी के लाभ-हानि खाते का निर्मित प्रारूप तैयार कीजिए।

   Prepare latest Specimen of Profit and Loss Account of a Banking Company.

4. नित्यारक कील है? एक नित्यारक के अन्तिम खाता विवरण का नमूना दीजिए।

   Who is a Liquidator? Give Specimen of Final Statement of Account of a Liquidator.

5. निम्नलिखित में से किन्ही दो पर टिप्पणी लिखिए-

   Write notes on any two of the following:
   (अ) असामान जीवित के लिएअतिरिक्त विवरण  
   एक अन्तिम में अतिरिक्त विवरण  
   (ब) सूचनार्थी कंपनी एवं सहायक कंपनी  
   एक अन्तिम में अतिरिक्त विवरण  
   (स) अंश एवं अनुपात  
   Share and Debenture

6. नरम्दा कंपनी के, जबलपुर के निम्न परीक्षा सूची से आयको 31 मार्च, 2009 को समाप्त होने वाले वर्ष के 
   लिए अंतिम लेखे बनाने हैं।

   From the following trial balance of Narmada Co. Ltd. Jabalpur, you are required to prepare 
   Final Accounts for the year ended 31st March 2009.

   परीक्षा सूची (दिनांक 31-03-2009)

   Trial Balance (as on 31st March 2009)

<table>
<thead>
<tr>
<th>विवरण (Particulars)</th>
<th>विकल्प (Debit)</th>
<th>समकलन (Credit)</th>
</tr>
</thead>
<tbody>
<tr>
<td>प्रारंभिक स्थं (Opening Stock)</td>
<td>7,500</td>
<td></td>
</tr>
<tr>
<td>क्रप (Purchase)</td>
<td>24,500</td>
<td></td>
</tr>
<tr>
<td>मजरुह (Wages)</td>
<td>5,000</td>
<td></td>
</tr>
<tr>
<td>विक्र (Sales)</td>
<td>35,000</td>
<td></td>
</tr>
<tr>
<td>वेतन (Salaries)</td>
<td>750</td>
<td></td>
</tr>
<tr>
<td>फिराप (Rent)</td>
<td>495</td>
<td></td>
</tr>
<tr>
<td>सामान्य व्य (General Expenses)</td>
<td>1,705</td>
<td></td>
</tr>
<tr>
<td>लाभावल्ल मत्त (Dividend paid)</td>
<td>900</td>
<td></td>
</tr>
<tr>
<td>लाभावल्ल लेखा(1-4-2008) [P &amp; L A/c (1-4-2008)]</td>
<td>1,503</td>
<td></td>
</tr>
<tr>
<td>अनपर्यन्त अरण्य (Bad debts)</td>
<td>483</td>
<td></td>
</tr>
<tr>
<td>संस्थित (Reserves)</td>
<td>1,550</td>
<td></td>
</tr>
<tr>
<td>लेनदार (Creditors)</td>
<td>1,750</td>
<td></td>
</tr>
<tr>
<td>देयदार (Debtors)</td>
<td>3,750</td>
<td></td>
</tr>
<tr>
<td>पूंजी (Capital)</td>
<td>10,000</td>
<td></td>
</tr>
<tr>
<td>म्यं (Machinery)</td>
<td>2,900</td>
<td></td>
</tr>
<tr>
<td>रॉक (Cash)</td>
<td>1,620</td>
<td></td>
</tr>
<tr>
<td>अथवा (Discount)</td>
<td>700</td>
<td>500</td>
</tr>
<tr>
<td></td>
<td>50,303</td>
<td>50,303</td>
</tr>
</tbody>
</table>

[P.T.O]
Stock amounted to Rs 8,200 on 31-3-2009
Charge 10% Depreciation on Machinery.
Outstanding rent is Rs 45
Prepaid general expenses are Rs 38.

The Balance Sheet of Sudha Ltd. as on 31st March 2004 was as follows:

<table>
<thead>
<tr>
<th>Liabilities</th>
<th>Rs</th>
<th>Assets</th>
<th>Rs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share Capital:</td>
<td></td>
<td>Fixed Assets</td>
<td></td>
</tr>
<tr>
<td>Issued &amp; Paid up:</td>
<td></td>
<td>Land &amp; Buildings</td>
<td>3,00,000</td>
</tr>
<tr>
<td>80,000 equity shares of Rs 10 each</td>
<td>8,00,000</td>
<td>Plant &amp; Machinery</td>
<td>2,00,000</td>
</tr>
<tr>
<td>General Reserve</td>
<td>4,61,000</td>
<td>Furniture</td>
<td>1,00,000</td>
</tr>
<tr>
<td>Statutory Reserve</td>
<td>39,000</td>
<td>Current Assets:</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Stock</td>
<td>1,50,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Debtors</td>
<td>1,50,000</td>
</tr>
<tr>
<td>Profit and Loss</td>
<td>56,300</td>
<td>Cash in hand</td>
<td>50,000</td>
</tr>
<tr>
<td>Sundry creditors</td>
<td>1,43,700</td>
<td>Cash at Bank</td>
<td>5,50,000</td>
</tr>
<tr>
<td></td>
<td>15,00,000</td>
<td></td>
<td>15,00,000</td>
</tr>
</tbody>
</table>

The Balance Sheet of Sushma Ltd. as on 31st March 2004 was as follows:

<table>
<thead>
<tr>
<th>Liabilities</th>
<th>Rs</th>
<th>Assets</th>
<th>Rs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share Capital:</td>
<td></td>
<td>Fixed Assets</td>
<td></td>
</tr>
<tr>
<td>Issued &amp; Paid up:</td>
<td></td>
<td>Land &amp; Buildings</td>
<td>1,50,000</td>
</tr>
<tr>
<td>30,000 equity shares of Rs 10 each</td>
<td>3,00,000</td>
<td>Plant &amp; Machinery</td>
<td>1,00,000</td>
</tr>
<tr>
<td>General Reserve</td>
<td>1,00,000</td>
<td>Furniture</td>
<td>50,000</td>
</tr>
<tr>
<td>Statutory Reserve</td>
<td>12,500</td>
<td>Current Assets:</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Stock</td>
<td>75,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Debtors</td>
<td>75,000</td>
</tr>
<tr>
<td>10% Debentures</td>
<td>50,000</td>
<td>Cash in hand</td>
<td>25,000</td>
</tr>
<tr>
<td>Creditors</td>
<td>27,500</td>
<td>Cash at Bank</td>
<td>50,000</td>
</tr>
<tr>
<td></td>
<td>5,25,000</td>
<td></td>
<td>5,25,000</td>
</tr>
</tbody>
</table>

1 April 2004 को सुष्मा लिंट का प्रतिफल का निर्धारण शुद्ध सम्पत्ति विधि से किया जाता है, और सुष्मा लिंट द्वारा प्रतिफल का भुगतान 10 रु. 40,000 संताजा अंशों में सम-भुगतान पर तथा शेष 47,500 रु. नगदी में किया जाएगा ।
The Consideration of the business was fixed by net assets method and consideration is to be discharged by Sudha Ltd. in the form of its 40,000 equity shares of Rs 10 each at par and the balance of Rs 47,500 in cash.

You are required to pass the necessary journal entries in the books of Sudha Ltd. and prepare a Balance Sheet after the merger.

The following balances are available from the accounts of Bharat Bank Ltd. you are required to prepare profit & loss Account for the year ending 31st March 2006 in the prescribed format.

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest on Loan</td>
<td>5,18,000</td>
</tr>
<tr>
<td>Interest on fixed deposits</td>
<td>5,50,000</td>
</tr>
<tr>
<td>Commission received</td>
<td>16,400</td>
</tr>
<tr>
<td>Salaries and allowances</td>
<td>1,08,000</td>
</tr>
<tr>
<td>Discount on bills discounted</td>
<td>3,90,000</td>
</tr>
<tr>
<td>Interest received on cash credit</td>
<td>4,46,000</td>
</tr>
<tr>
<td>Interest received on current account</td>
<td>84,000</td>
</tr>
<tr>
<td>Rent &amp; taxes</td>
<td>36,000</td>
</tr>
<tr>
<td>Interest on overdrafts</td>
<td>3,08,000</td>
</tr>
<tr>
<td>Directors' fees</td>
<td>6,000</td>
</tr>
<tr>
<td>Auditors' fees</td>
<td>2,400</td>
</tr>
<tr>
<td>Interest on Saving Bank Accounts</td>
<td>1,36,000</td>
</tr>
<tr>
<td>Postage &amp; telegrams</td>
<td>2,800</td>
</tr>
<tr>
<td>Printing and Stationery</td>
<td>5,800</td>
</tr>
<tr>
<td>Locker's Rent</td>
<td>2,000</td>
</tr>
<tr>
<td>Transfer Fees</td>
<td>1,400</td>
</tr>
<tr>
<td>Depreciation on Bank's Properties</td>
<td>10,000</td>
</tr>
<tr>
<td>Sundry Income and Charges</td>
<td>3,400</td>
</tr>
<tr>
<td>Rebate on Bills Discounted</td>
<td>98,000</td>
</tr>
<tr>
<td>Bad debts</td>
<td>80,000</td>
</tr>
<tr>
<td>Provision for Income Tax</td>
<td>3,00,000</td>
</tr>
</tbody>
</table>

The other informations are as follows:-

- Rebate on Bills Discounted: 98,000
- Bad debts: 80,000
- Provision for Income Tax: 3,00,000

Share Capital 1000 Shares of Rs 100 each: 1,00,000

Fully secured creditors (Received on securities Rs 40000): 35,000

[PTO]
Prepare the Final Statement of Account of the Liquidator.


<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reinsurance premium paid</td>
<td>50,000</td>
</tr>
<tr>
<td>Reserve for unexpired risk 1.4.2004</td>
<td>8,24,800</td>
</tr>
<tr>
<td>Expenses of Management</td>
<td>1,25,600</td>
</tr>
<tr>
<td>Premium received</td>
<td>7,89,000</td>
</tr>
<tr>
<td>Commission</td>
<td>1,52,000</td>
</tr>
<tr>
<td>Claims paid</td>
<td>2,21,000</td>
</tr>
<tr>
<td>Loss on exchange</td>
<td>9,000</td>
</tr>
<tr>
<td>Outstanding claims</td>
<td>2,81,000</td>
</tr>
</tbody>
</table>

You are required to prepare Revenue Account for the year ended 31-3-2005, after taking the following informations into consideration:

(i) Provide for unexpired risk at 50% of the premium.

(ii) Additional reserve is to be increased by 10% of the net premium.

(iii) Premiums outstanding at the end of the year Rs 1,50,000.

(iv) On 31st March 2005 the claim outstanding were Rs. 3,37,000.

(v) Commission earned on reinsurance Rs 5,000.
1. “सभी अनुबंध ठहराये हैं किन्तु सभी ठहराये अनुबंध नहीं हैं।” विवचन कीजिए।
"All contracts are agreements but all agreements are not contracts." Discuss.

2. Write short notes on the following.
   (a) उपेड़ (Coercion)
   (b) अनुमालित प्रमाण (Undue influence)
   (c) कैफ (Fraud)
   (d) विधानवर्णन (Misrepresentation)

3. लाभ रक्षा संबंध की परिभाषा दीजिए। लाभ रक्षा शरीरी के अधिकारों की व्यवस्था कीजिए।
   Define contract of indemnity. Explain the rights of indemnity holders.

4. एजेंट की समान्तिकता किस प्रकार का है?
   How can agency be terminated?

5. विक्रय संबंध क्या है? इसके क्या लक्षण हैं? विक्रय तथा विक्रय के ठहराव में क्या अन्तर है?
   What is contract of sale? What are its characteristics? What is the difference between sale and agreement to sell?

6. विलेनियालिता के अधिकारी एकदम कर्त्तव्य की विवेचनाक कीजिए।
   Discuss the rights and duties of bailee.

7. परिस्थितियों के आधार से क्या आचार हैं? बतायें कि एक परिस्थिति और किन परिस्थितियों में समाप्त हो सकती है?
   What is meant by dissolution of a firm? State how and under what circumstances a firm may be dissolved?

8. विलेनियालिता की परिभाषा दीजिए। एक विलेनियालिता की अयोग्यता क्या है और वे कैसे दूर की जाती है?
   Define the term 'Insolvent'. What are the disqualifications of an insolvent and how are they removed?

9. विलेनियालिता के विशेषताओं का वर्णन कीजिए। उनके वापस क्या है? व्यवस्था कीजिए।
   Describe the characteristics of public carrier. What are their liabilities? Explain.

10. विलेनियालिता को प्रतिबन्ध पत्र की परिभाषा दीजिए तथा उनकी विशेषताओं बतायें। दोस्तों के बीच क्या अन्तर है?
    Define Bills of Exchange and promissory note and explain their salient features. What are the differences between the two?
1. What is meant by economic planning? Explain briefly different types of planning.

2. Why Economic Planning is essential? Explain the objectives of economic planning in India.

3. Describe the charactristics of Indian economy as an underdeveloped economy.

4. What are the effects of rapid rise in population on economic development? Explain.

5. What are the causes of low productivity of agriculture in India? How these causes can be removed?

6. What is cooperative farming? What are its advantages? Evaluate the position of cooperative farming in India.

7. What is cooperative credit organisation? What is its role in the field of agricultural finance?

8. Describe the present position and problems of Iron and Steel Industry in India.

9. What are the causes of slow progress of cottage and small scale industries in India? How these causes can be removed?

10. Discuss the contributions of Public Sector in the economic development of India.
1. **Write a short essay on the evolution of money and throw light on the importance of money.**

2. **What is index number? What essential points should be taken into consideration in its preparation?**

3. **Explain critically the quantity theory of money propounded by Fisher.**

4. **Inflation is unjust while deflation is inexpedient. Of the two deflations is perhaps worse. Discuss.**

5. **Describe the factors which affect determination of exchange rate.**

6. **Define Bank. Analyse the investment policy of a commercial Bank.**

7. **Explain different types of loans extended by a bank.**

8. **“Central bank is the banker of all other banks.” Discuss this statement.**

9. **What do you mean by branch banking? Describe its merits and demerits.**

10. **Describe the qualitative methods of credit control.**
1. Define and distinguish with example any Three of the following pairs :-
   अनुप्रीयित युगों से किन्हीं तीन को परिभाषित कीजिए एवं सोदाहरण विभिन्नता बताएँ :-
   (a) Paleontology and Archaeology
       जीवाश्म विज्ञान एवं पुरातत्वविज्ञान
   (b) Alchemy and Amalgamation
       शक्ति और अमलगमन
   (c) Telescope and Spectroscopy
       टेलिस्कोपी एवं स्पेक्ट्रोस्कोपी
   (d) Calligraphy and cartography
       कलालाखापी एवं कार्टोग्राफी

2. (a) Name two ways in which INSAT-1B has enabled you to get information which would not have been possible otherwise.
   ऐसी दो पद्धतियों या सेवाओं के नाम बताइए जिसका उपयोग इन्सेट-1B के अंतरिक्ष में स्थापित होने के बाद किया जाने लगा है, जिनका उपयोग इन्सेट (उपग्रह) के बिना संभव नहीं होता।
   (b) Which of the future communication techniques would be most useful in the Indian context and why?
       कीव-कीव से भारी संचार तकनीकें भारत के संबंध में सबसे अधिक उपयोगी होंगी? और क्यों होंगी?

3. Describe the role of AIR and Doordarshan in education.
   आईआर और दूरदर्शन की भूमिका बताएँ।

4. Some diseases have been listed in column I; Write down the corresponding deficiencies in column II.

<table>
<thead>
<tr>
<th>COLUMN-I</th>
<th>COLUMN-II</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disease (रोग)</td>
<td>Deficiency (पोषक तत्त्व की कमी)</td>
</tr>
<tr>
<td>(a) Night blindness (र्तीयी)</td>
<td></td>
</tr>
<tr>
<td>(b) Goitre (पेघा)</td>
<td></td>
</tr>
<tr>
<td>(c) Kwashiokar (क्वाशियोरकर)</td>
<td></td>
</tr>
<tr>
<td>(d) Marasmus (सूखा रैग)</td>
<td></td>
</tr>
<tr>
<td>(e) Rickets (रिकेट्स)</td>
<td></td>
</tr>
<tr>
<td>(f) Anaemia (एनिमिया)</td>
<td></td>
</tr>
<tr>
<td>(g) Pellagra (पलाग्रा)</td>
<td></td>
</tr>
<tr>
<td>(h) Bow legs (टांगे टेंडी)</td>
<td></td>
</tr>
</tbody>
</table>

5. What is semi-conductor? Discuss the various semi-conductor devices and their uses.
   सेमीकंडक्टर क्या है? विभिन्न सेमीकंडक्टर-साधनों एवं उनके उपयोगों का विवेचन कीजिए।

6. Comment briefly on agriculture in the following special areas:-
   निम्नलिखित विशेष क्षेत्रों में कृषि के बारे में संशोधन में लिखिए :-
7. (a) In what way the concept of spontaneous generation of life was discarded by the works of Louis Pasteur?

(b) Explain briefly the impacts of Miller’s experiment on the classical theories of origin of life.

8. Give at least two examples of the plants representing each of the following groups that are commonly grown in our country.

GROUP
EXAMPLE (अनाज और ज्वार आदि)

(a) Cereals and millets (अनाज और ज्वार आदि)
(b) Pulses (दलें)
(c) Oilseeds (तिलहानि)
(d) Sugar crops (शर्करा फसलें)
(e) Fiber crops (रेखेदार फसल)
(f) Tuber crops (कपड़े फसल)
(g) Plantation crops (रोपण फसल)
(h) Fruits and vegetables (फल और सब्जियाँ)


10. Write T for true and F for the false against the following statement:-

(a) Tall smoke stacks contribute to the acid rain problem.

(b) Eutrophication is caused by the inhibition of algal blooms.

(c) The level of dissolved oxygen decreases in the ponds or any standing water body that receives organic wastes.

(d) Technological developments are in no way responsible for increased pollution.
1. What is a loader? Mention the functions performed by a loader. Explain the Dynamic Loading scheme.
2. Compare and contrast the features of paging and segmentation. Which concept is better? Justify your answer with an example.
3. What is a deadlock? What are the essential conditions that characterize a deadlock? How can the occurrence of a deadlock be avoided with various strategies?
4. Explain directory structure and file system in UNIX (with suitable diagrams).
5. Write a shell script to display the smallest file (in respect of the size of the file) among the list of the files available in any directory given as input.
6. List and execute the following UNIX commands:
   (a) To count the number of files in the current directory.
   (b) To count the number of lines in a given file.
   (c) To count the number of words in a given file.
   (d) To directly move to the root from the current directory.
   (e) To change the password.

1. Compare and contrast the features of paging and segmentation. Which concept is better? Justify your answer with an example.
2. Explain the utility of Lex in the construction of a compiler. Explain the working of a 2-pass assembler.
3. Explain CPU scheduling? Describe different types of scheduling algorithms.
4. Discuss directory structure of UNIX file? Write UNIX commands for the following:
   (i) to search a particular pattern in the given file.
   (ii) to display the first 20 lines of a particular file.
   (iii) to shut down the systems at the given time.
   (iv) to print the calendar for the particular year and month.
   (v) to make the file ready only for all the users.
5. Write a shell script to print the first 20 numbers of the Fibonacci series. Also draw the flowchart for the same.
6. What is a deadlock? What are the essential conditions that characterize a deadlock? How can the occurrence of a deadlock be avoided with various strategies?
Attempt any five questions. All questions carry equal marks.

1. Write an algorithm and draw the corresponding flow chart for checking whether the given number is an Armstrong number or not (for e.g., 153 is Armstrong No. 153 = 1x1x1+5x5x5+3x3x3). Write the shell script for the same?

2. What is a loader? Mention the functions performed by a loader. Explain the Dynamic loading scheme.

3. Compare and contrast the features of paging and segmentation. Which concept is better? Justify your answer with an example.

4. Generate the Parse tree for expression the grammar rules are given below:
   \[
   \text{List} = \text{list} + \text{digits} \\
   \text{List} = \text{list} - \text{digits} \\
   \text{List} = \text{list} \times \text{digits} \\
   \text{List} = \text{list} \\
   \text{Digits} = 0/1/2/3/4/5/6/7/8/9.
   \]

5. What is a deadlock? What are the essential conditions that characterize a deadlock? How can the occurrence of a deadlock be avoided with various strategies?

6. Discuss directory structure of UNIX file? Write UNIX commands for the following:
   (i) to search a particular pattern in the given file.
   (ii) to display the first 2A lines of a particular file.
   (iii) to shut down the systems at the given time.
   (iv) to print the calendar for the particular year and month.
   (v) to make the file ready only for all the users.

7. Explain the utility of Lex in the construction of a compiler. Explain the working of a 2-pass assembler.

8. Multiprogramming imply multiprocessing or multitasking but the converse is not true. Support the statement and discuss briefly. Illustrate and discuss with a diagram.

9. Explain directory structure and file system in UNIX (with suitable diagrams).

10. Explain CPU scheduling? Describe different types of scheduling algorithms.
Nalanda Open University  
Annual Examination - 2011  
Bachelor in Computer Application (BCA) Part-II  
Paper-IX (Elements of System Analysis and Design) CS-05  

Time: 3.00 Hrs.                                                                       Maximum Marks: 80  

Attempt any five questions. All questions carry equal marks.

1. What do we consider while designing the Forms and Reports? Explain giving an example.
2. What is Vendor selection? Why it is required? Explain the criteria’s of Vendor selection.
3. What is a DFD? Write the rules for drawing a DFD? Construct a DFD up to 2-levels for a School management system. Make assumptions, wherever necessary.
4. What is meant by “feasibility study”? Explain different types of feasibility? Discuss its importance in system development.
5. What are the characteristics of a good human machine interface design? Also, list characteristics of input design. Suggest one method for input verification and control.
6. Compare the advantages and disadvantages of a Gantt chart to a PERT Chart. How can CASE tools benefit conceptual data modeling? Explain with an example.
7. Discuss maintenance of a software product? Why is software piracy an important issue in a software design? Support the answer with an example.
8. Define the term "Data Dictionary". What is the need for a Data Dictionary? Write the rules and symbol used in data dictionary with an example.
9. What is ergonomics? How is it relevant in system design? Explain documentation. Give features of each type of documentation.
10. Write a short note on any three of the following:
    (i) HIPO Diagram
    (ii) Levels of quality assurance
    (iii) Components of multimedia
    (iv) Transaction Processing System
    (v) Role of a system analyst

BCA, Part-II (2007 वा उससे पूर्व के विद्यार्थी) के परीक्षार्थियों को सूचित किया जाता है कि उनके प्रैक्टिकल की परीक्षा निम्न कार्यक्रम के अनुसार, नालंदा खुला विश्वविद्यालय, बिस्कोमान टॉवर के 12वें तल पर संचालित होगी :-

<table>
<thead>
<tr>
<th>पत्र</th>
<th>तिथि</th>
<th>समय</th>
</tr>
</thead>
<tbody>
<tr>
<td>XII (CS-65)</td>
<td>11.03.2011</td>
<td>12.00 to 03.00 P.M.</td>
</tr>
<tr>
<td>XIV (CS-68)</td>
<td>15.03.2011</td>
<td>08.00 to 11.00 A.M.</td>
</tr>
<tr>
<td>VIII (CS-63)</td>
<td>16.03.2011</td>
<td>12.00 to 03.00 P.M.</td>
</tr>
</tbody>
</table>
Attempt any five questions. All questions carry equal marks.

1. A marketing company maintains information about salespersons, Areas and Products. Salespersons have a unique identification number, name, designation and area allocated to each one. Areas are divided with a number and names.
   Products have their number, name, cost, discount, and the areas where these product.
   A sales person can sell any product in their areas, and maintains a monthly statement which shows the number of products sold, along with their cost, discount and date of delivery. On the basis of the above specification answer the following questions:
   (i) Design an ER diagram indicating attributes. Describe the types of relationships between the entities.
   (ii) Derive the number of tables from the ER diagram and define the primary keys.
   (Note: Make and state necessary assumptions, if any.)

2. Explain the difference between traditional file approach and database approach. Which you find is better and why? Justify your answer.

3. What are the problems in relational databases. How can it be overcome by using Object Oriented RDBMS.

4. Explain any six E. F. Codds rule for DBMS with suitable examples.

5. What are the main features of client server model? Explain the stages involved in the development of an application using this model.

6. Explain ISAM and VSAM? Explain how using a B + tree increases the efficiency of processing in DBMS.

7. Explain the significance of multimedia and knowledge databases. Also, give two examples for each.

8. Explain the concept of functional dependency using a suitable example with the help of a dependency diagram. Explain 3 NF and BCNF?

9. What are the features of distributed database? Discuss the advantages and disadvantages of data replication in distributed databases. Is there any use of data replication in relational databases?

10. Write short notes on any three:
    (i) File Manager.
    (ii) Database Manager
    (iii) Data dictionary
    (iv) Three views of database.
    (v) DBA
Nalanda Open University
Annual Examination - 2011
Bachelor in Computer Application (BCA) Part-II
Paper-XI (Introduction to Computer Organization) CS-64

Time: 3.00 Hrs.                                                                       Maximum Marks: 80 / 75

Attempt any five questions. All questions carry equal marks.

1. Do the following conversions:
   (i) \((1024.25)_{10} = ( \_ )_2\)
   (ii) \((767257)_{8} = ( \_ )_2\)
   (iii) \((\text{FED})_{16} = ( \_ )_8\)
   (iv) \((1100.1010)_2 = ( \_ )_{16}\)
   (v) \((0011101.10)_2 = ( \_ )_{10}\)
   (vi) \((2242)_{10} = ( \_ )_{16}\)

2. Simplify the following Boolean function using SOP form, using K-Map.
   \(F(A, B, C, D) = (0,1,3,5,7,9,10,14)\). Draw the circuit for the solution.

3. Explain different types of addressing modes with an example?

4. Describe different types of control units? Explain their advantages and disadvantages.

5. Explain Hamming Error Correcting Code method for detecting and correcting single bit error in
   the data, with the help of an example.

6. Explain the difference between synchronous and asynchronous counter. Draw a 4 bit ripple
   counter?

7. What is a sequential circuit? Draw a J-K flip-flop and explain how it overcomes the undefined
   condition of R-S flip-flop.

8. Write a program in 8086 assembly language to find if a number is prime or not.

9. What is an instruction? Explain the format of an instruction. Explain the various categories of
   instructions.

10. Write short notes on any three:
    (i) Master slave flip-flop
    (ii) PLA
    (iii) Floating point number
    (iv) Don’t Care condition
    (v) Multiplexer.
1. Create a simple VB application to simulate the billing system for sports stores. Also, design the screen for this application. Design the user interface with appropriate controls the bill should consist of the date and time.

2. Create a VB application to simulate a simple calculator. Place appropriate controls on the user interface.
SET-I

Nalanda Open University
Annual Examination - 2011
Bachelor in Computer Application (BCA) Part-II
Paper-XII (Windows Programming) CS-65 [Practical Question]

Time: 2.00 Hrs.                                                                 Maximum Marks: 80+20

Answer all the questions. Write all the steps in the copy.

1. Write an event procedure to concatenate two strings given as input and should display the resultant string. Use appropriate controls to design the user-interface.

2. Create a simple VB application to simulate the billing application of a gas agency. The bill should contain the bill-no (auto generated), date and time also. Design the User interface with appropriate controls. Also, design the splash screen for this application.

3. Write some characteristics of VB and explain them.

SET-II

Nalanda Open University
Annual Examination - 2011
Bachelor in Computer Application (BCA) Part-II
Paper-XII (Windows Programming) CS-65 [Practical Question]

Time: 2.00 Hrs.                                                                 Maximum Marks: 80+20

Answer all the questions. Write all the steps in the copy.

1. Create a simple VB application to simulate the generation of a LIC premium receipt. The premium receipt should contain the Policy No. date, time, and details of the policy, name of the policy holder, address and amount. Design the splash screen for this application.

2. Create a VB application to simulate a simple calculator. Place appropriate controls on the user interface.

3. Explain at least five components of VB and their use.
Attempt any five questions. All questions carry equal marks.

1. (a) Discuss how multimedia can be used for the following application areas:
   (i) Website of any Advertisement agency.
   (ii) Website of any Educational Institution.

   (b) What is QuickTime? Discuss the importance of this product and how does it work.

2. What are authoring tools? What are the different functions provided by most of the authoring software? Explain.

3. Discuss the multimedia components? What is morphing? How is it similar to different from warping?


5. Explain how does the scripting language program facilitate multimedia creation?

6. List the hardware and software components essential for professional multimedia development. Also, justify the purpose and need of each of the hardware components.


9. What are annotations? What is extension .avi and .wav? What are the differences between them?

10. Explain the role of Multimedia in communication. Explain any five features of Macromedia Director.