FACULTY OF SOCIAL SCIENCES
M.A. (APE: 5-YIPGP) III- SEMESTER REGULAR EXAMINATIONS, DEC-2017
MATHEMATICS –III (Differential Equations)
PAPER-IV

Time: 3 Hours]   [Max. Marks: 70

Note: Answer all questions from Section – A and Section – B

Section – A   (5x4=20)

Answer the following questions in not more than **ONE** page each:

1. Define the exact differential equations.

2. Enumerate the procedure for equations solvable for 'p'.

3. What do you mean by the method of undetermined co-efficient?

4. Examine the system of 'n' linear differential equation.

5. Write a note on the applications of first order differential equations for economics.

Section – B   (5x10=50)

Answer the following questions in not more than **FOUR** pages each:

6. a) Solve $\frac{dy}{dx} = \frac{x(2\log x + 1)}{\sin y + y \cos y}$.

    (OR)

   b) Solve $(1 + xy)y\,dx + (1 - xy)x\,dy = 0$.

7. a) Solve $y + P_x = x^4 P^2$.

    (OR)

   b) Solve $(p - xy)(p - x^2)(p - y^2) = 0$.

8. a) Solve $\frac{d^2y}{dx^2} + 3\frac{dy}{dx} + 2y = 12\,e^x$ by the method of undetermined co-efficient.

    (OR)

   b) Examine the method of variation of parameters.

9. a) Solve $(3D - 1)x + 4y = t, Dx - Dy = t - 1$.

    (OR)

   b) Enumerate an equivalent triangular system.

10.a) Find the orthogonal trajectories of $x^2 + y^2 = cx$ … …

    (OR)

   b) Solve $x^2\frac{d^2y}{dx^2} + 4x\frac{dy}{dx} + 2y = e^x$ by using Cauchy0Euler equations.

--oOo--

FACULTYOF ARTS
M.A. (ENGLISH) III – SEMESTER REGULAR EXAMINATIONS, DEC-2017
INDIAN LITERATURES IN ENGLISH TRANSLATION-I
PAPER – IV (a)

Time: 3 Hours]   [Max. Marks: 70

Note: Answer all questions from Section – A and Section – B

<u>Section – A</u>   (5x4=20)

Answer the following questions in not more than **ONE** page each:

1. A short note on Arabic, Persian and Urdu Ghazals.
2. Features of 'Sangam Poetry'.
3. Are stories of Panchatantra pertinent even today? Explain.
4. Character sketch of King Dushyanth in Kalidasa's *Abhijnana Shakuntalam*.
5. How does Indian tribal narrative create a community consciousness?

<u>Section – B</u>   (5x10=50)

Answer the following questions in not more than **FOUR** pages each:

6. a) A detailed note on the form and structure of a 'Ghazal'.
    (OR)
    b) Discuss in detail the four aspects of the theory of Natya and Kavya.

7. a) Sant Tukaram's poem *Being in turmoil* is an integral dimension of his personality. Explain.
    (OR)
    b) Sangam literature deals with emotional and material topics such as love, war, governance, trade and bereavement. Analyze.

8. a) Plot and characterization of *The Hermit and the Mouse* from Book 2 of Panchatantra.
    (OR)
    b) Chart the origin and spread of Jataka Tales.

9. a) Analyse Kalidasa's *Abhijnana Shakuntalam* as theatre of memory.
    (OR)
    b) What does the title mean and signify in the play Sudraka's *Mrichakatika*.

10. a) A folk tribal story can never be said to be finished and final in form. Explain.
    (OR)
    b) Briefly comment on the structural division of Introduction, Tradition and Amnesia, A Never-ending Transition and After Amnesia in G.N. Devy's essay *After Amnesia*.

--oOo--

FACULTYOF ARTS
M.A. (ENGLISH) III – SEMESTER REGULAR EXAMINATIONS, DEC-2017
MODERN CLASSICS IN TRANSLATION-I
PAPER – IV (b)

Time: 3 Hours]   [Max. Marks: 70

Note: Answer all questions from Section – A and Section – B

<u>Section – A</u>   (5x4=20)

Answer the following questions in not more than **ONE** page each:

1. Explain Avant-garde.

2. Write a brief note on 'Rainer Maria Rilke'.

3. Comment on Fyodor's 'Notes from the Underground'.

4. Write the plot of Ibsen's 'A Doll's House'.

5. Write bio-info of Leo Tolstoy.

<u>Section – B</u>   (5x10=50)

Answer the following questions in not more than **FOUR** pages each:

6. a) Explain Bourgeois experience in detail.
                                (OR)
   b) Discuss Enlightenment.

7. a) Discuss Charles Baudelaire's poetry with reference to the poems prescribed for your study.
                                (OR)
   b) Critically appreciate 'Gracia Lorca's Poem' 'The King of Harlem'.

8. a) Write the theme of Gustav Flaubert's 'Madame Bovary'.
                                (OR)
   b) Discuss Dostoevesky's style of narration.

9. a) Explain Anton Chekhov's 'Cherry Orchard'.
                                (OR)
   b) How do you understand Ibsen's 'A Doll's House'?

10. a) Explain Kafka's 'Metamorphosis'.
                                (OR)
    b) Discuss Tolstoy's 'The Death of Ivan llych'.

--oOo--

FACULTY OF ARTS
M.A. (HINDI) III – SEMESTER REGULAR EXAMINATIONS, DEC-2017
HINDI DALIT SAHITYA
PAPER – IV

Time: 3 hours]   [Max. Marks: 70

Note: Answer all questions from Section – A and Section – B

Section – A

सूचना - निम्न लिखित प्रश्नों के उत्तर एक पृष्ठ से अधिक न हो ।   (5x4=20)

1. 'दलित शब्द' का अर्थ बतातो हुए परिभाषा लिखिए।
2. जयप्रकाश कर्दम ने 'छप्पर' नाम क्यों दिया?
3. ओमप्रकाश वाल्मीकि के 'पाठशाला' के अनुभव लिखिए ।
4. दलित आंदोलन की विशेषताओं को बताइए।
5. 'दलित कहानी' का उदभव कब हुआ?

Section – B

सूचना - निम्न लिखित प्रश्नों के उत्तर 4 पृष्ठों से अधिक न हो ।   (5x10=50)

6.   a) भय कहानी की विशेषता बताइए ।
        (OR)
     b) दलित साहित्य को प्रेरण, ज्योतिबा फुले के अंदोलन, डा. अम्बेडकर के अंदोलन को माना जाता है. सिद्ध कीजिए ।

7.   a) 'दलित साहित्य की परंपरा पर प्रकाश डालिए ।
        (OR)
     b) 'सपना' कहानि का सारांश लिखिए ।

8.   a) छप्पर में चित्रित 'दलित चेतना' को स्पष्ट कीजिए।
        (OR)
     b) छप्पर में चित्रित चंदन के जाति विषयक अनुभवों पर प्रकाश डालिए ।

9.   a) 'बौल की खाल' कहानी का सारांश लिखिए ।
        (OR)
     b) 'सलाम' कहानी में चित्रित कुप्रथा पर प्रकाश डालिए ।

10. a) 'जूठन' में लेख्क को किस प्रकार के जाति विषयक अनुभव आए हैं ? बताइए ।
        (OR)
     b) 'जूठन' में दलितो की कौन–कौनसी समस्याएँ दिखाई देती है? स्पष्ट कीजिए ।

--oOo--

FACULTYOF SOCIAL SCIENCES

M.A (Mass Communication) III– SEMESTER REGULAR EXAMINATIONS, DEC-2017

ELECTRONIC MEDIA-I

PAPER – IV

Time: 3 Hours] [Max. Marks: 70

Note: Answer all questions from Section – A and Section – B

Section – A (5x4=20)

Answer the following questions in not more than **ONE** page each:

1. Pre-production
2. Camera Positioning
3. Documentary
4. Voice over
5. Graphics

Section – B (5x10=50)

Answer the following questions in not more than **FOUR** pages each:

6. a) What are the different stages of TV programme production and explain about them.

(OR)

b) Explain about the importance of pre-production work in programme production.

7. a) Explain the importance of camera and its positioning in film shooting.

(OR)

b) Write about the role of lighting and its uses in film shootings.

8. a) Elaborate on the need for script writing in programme production.

(OR)

b) Write a brief notes on short films, documentaries and talk shows.

9. a) Explain about the TV news production process from script to screen.

(OR)

b) Write about the different news-based programmes like Interviews, Talk Shows and Live-in shows.

10. a) What are the types of editing, write about linear and non-linear editing.

(OR)

b) What is Brand Promotion and explain about the marketing strategies.

--oOo--

FACULTY OF ARTS
M.A.(TSD) III – SEMESTER REGULAR EXAMINATIONS, DEC-2017
CLASSICAL LITERATURE OF TELANGANA
PAPER – IV

Time: 3 hours]   [Max. Marks: 70

Note: Answer all questions from Section – A and Section – B

Section – A

సూచన: క్రింది ప్రశ్నలకు <u>ఒకపేజి</u> మించకుండ సమాధానాలు వ్రాయండ్రి   (5x4=20)

1. పాపన్నపేట
2. మౌఖిక సాహిత్యం
3. యక్షగానాలు
4. గోపాలపేట
5. గౌరన

Section – B

సూచన: క్రింది ప్రశ్నలకు <u>నాలుగు పేజీలు</u> మించకుండ సమాధానాలు వ్రాయండి.   (5x10=50)

6. a) ద్విపద ప్రక్రియా వికాసాన్ని సోదాహరణంగా తెల్పండి.
   (లేదా)
   b) పాల్కురికి సోమన భక్తితత్పరతను వివరించండి.

7. a) కథాకావ్యాల ప్రధాన లక్షణాలను వివరించండి.
   (లేదా)
   b) తెలంగాణ శతక ప్రక్రియ వైశిష్ట్యాన్ని తెల్పండి.

8. a) కొరవి గోపరాజు కవిత్వాన్ని సమీక్షించండి.
   (లేదా)
   b) తెలంగాణ శతక ప్రక్రియ వైశిష్టాన్ని తెల్పండి.

9. a) తెలంగాణ మాండలిక స్వరూపాన్ని తెల్పండి.
   (లేదా)
   b) తెలంగాణా భాషా స్వరూపాన్ని వివరించండి.

10. a) తెలంగాణ సంస్థానాల్లో వచ్చిన సాహిత్య వైశిష్ట్యాన్ని తెల్పండి.
    (లేదా)
    b) గోల్కొండ, జటప్రోలు, దోమకొండ సంస్థానాల సాహిత్య సేవను వివరించండి.

--oOo--

FACULTY OF ARTS
M.A. (URDU) III – SEMESTER REGULAR EXAMINATIONS, DEC-2017
LISANIYAAT
PAPER – IV

Time: 3 hours]

[Max. Marks: 70

نوٹ:۔ دھم 'الف' اور حصہ 'ب' کے تمام سوالات کے جواب مطلوب ہیں۔

(حصہ الف)   5×4=20

I:۔ تمام سوالات کے جواب مطلوب ہیں۔ جواب ایک صفحہ سے زائد نہ ہو۔

1۔ لسانیات کی تعریف کیجیے۔ اور اس کے مطالعے کی اہمیت واضح کیجیے۔

2۔ اب یوریش کے بارے میں آپ کیا جانتے ہیں بیان کیجیے۔

3۔ اردو کی ابتدا کے بارے میں نصیر الدین ہاشمی کے خیالات کا جائزہ لیجیے۔

4۔ بولی اور زبان کے فرق پر ایک نوٹ لکھیے۔

5۔ اردو اور ہندی کے مشترکہ عناصر پر اظہار خیال کیجیے۔

(حصہ 'ب')

II:۔ تمام سوالات کے جوابات مطلوب ہیں۔ ہر سوال چار صفحات سے زائد نہ ہو۔   (5×10=50)

6۔ مغربی ہندی اور اس کی بولیوں کا تعارف کرائیے۔
یا
مشرقی ہندی پر ایک جامع نوٹ تحریر کیجیے۔

7۔ آریوں کی آمد سے ہندوستان میں دور رس تہذیبی اور لسانی تبدیلیوں کا آغاز ہوتا ہے۔ اس بیان کی تائید میں بحث کیجیے۔
یا
جدید ہند آریائی زبانوں کے بارے میں ایسی معلومات قلم بند کیجیے۔

P.T.O.

۸- ہند آریائی کے پراکرت دور پر روشنی ڈالیے ۔

یا

اردو زبان کے آغاز کے بارے میں ڈاکٹر نور اور مسعود حسین خان کے نظریات کا جائزہ لیجیے ۔

۹- وسطی ہند آریائی کی نشو و نما کا جائزہ لیجیے ۔

یا

ہند آریائی کے آغاز و ارتقا پر تفصیلی نوٹ لکھیے ۔

۱۰- اردو کی ابتدا کے بارے میں محمود شیرانی اور سید سلیمان ندوی کے نظریات کا تنقیدی جائزہ لیجیے ۔

یا

قدیم ہند آریائی کے دور کا تعین کیجیے اور اس کے تحریری سرمایے پر روشنی ڈالیے ۔

FACULTY OF SOCIAL SCIENCES
M.A. (ECONOMICS) III – SEMESTER REGULAR EXAMINATIONS, DEC-2017
AGRICULTURAL ECONOMICS

PAPER – IV

Time: 3 hours]   [Max. Marks: 70

Note: Answer all questions from Section – A and Section – B

Section – A

Answer the following questions in not more than **ONE** page each: (5x4=20)

1. Define the rural credit in India
2. Explain Individual Crops
3. Explain agricultural markets
4. Define food security
5. Explain agricultural commodities

Section – B

Answer the following questions in not more than **FOUR** pages each: (5x10=50)

6.   a) Discuss the role of agriculture in economic development.
                                (OR)
     b) Explain the interdependence between agriculture and industry.

7.   a) Explain production function analysis in agriculture.
                                (OR)
     b) Discuss the labour absorption in agriculture.

8.   a) What are the objectives of agriculture price policy.
                                (OR)
     b) Bring out the significance of agriculture marketing.

9.   a) Explain the recent trends in agricultural growth in India.
                                (OR)
     b) Explain the sustainable agriculture and food security.

10. a) Explain the impact of World Trade Organization on Indian Agriculture.
                                (OR)
     b) Discuss the Impact of Globalization on Indian Agriculture.
                        --oOo--

FACULTY OF SOCIAL SCIENCES
M.A.(Political Science) III – SEMESTER REGULAR EXAMINATIONS, DEC-2017

POLITICAL ECONOMY OF INDIA
PAPER – IV

Time: 3 Hours]   [Max. Marks: 70

Note: Answer all questions from Section – A and Section – B

<u>Section – A</u>   (5x4=20)

Answer the following questions in not more than **ONE** page each:

1. Human Resources
2. Public Sector
3. Left Parties
4. Economic Reforms
5. World Bank

<u>Section – B</u>   (5x10=50)

Answer the following questions in not more than **FOUR** pages each:

6. a) Discuss the Salient features of Indian Economy.
    (OR)
   b) Describe the Technological base of Indian Economy.

7. a) Evaluate the Contribution of mixed Economic System in Indian Economy.
    (OR)
   b) Discuss the impacts of Green Revolution on Indian Economy.

8. a) Discuss the economic programme of the B.J.P.(Bharatiya Janatha Party)
     (Recent trends).
    (OR)
   b) Explain the Economic Programmes of C.P.I. (Communist Party of India).

9. a) Discuss the Course and Consequences of Economic disparities in India.
    (OR)
   b) Discuss the economic programmes of any one regional political party.

10. a) Discuss the Role of World Bank.
    (OR)
   b) Write an essay on multinational corporations on Indian Economy.

--oOo--

FACULTY OF SOCIAL SCIENCES
M.A. (Public Administration) III – SEMESTER REGULAR EXAMINATIONS, DEC-2017
HUMAN DEVELOPMENT & GOVERNANCE
PAPER – IV

Time: 3 Hours]   [Max. Marks: 70
Note: Answer all questions from Section – A and Section – B

Section – A   (5x4=20)

Answer the following questions in not more than **ONE** page each:

1. Global Warming
2. Inequality
3. Poverty
4. Life Expectancy
5. Education as Social Justice

Section – B   (5x10=50)

Answer the following questions in not more than **FOUR** pages each:

6. a) Write an essay on the concept of Human Development.
   (OR)
   b) Explain different Human Development Indicators.

7. a) Examine the different methods of measuring poverty.
   (OR)
   b) Critically examine the nature and dimensions of poverty.

8. a) Discuss the importance of Internal Aid.
   (OR)
   b) Explain the role of Infrastructure in Development.

9. a) Examine the role of NGOs in Human Development.

   (OR)
   b) Explain the emerging role of Civil Society in Human Development.

10. a) Examine the need for reservations in Corporate Sector.
   (OR)
   b) Evaluate the Social Justice Programmes implemented in India.

--oOo--

FACULTY OF SOCIAL SCIENCES
M.S.W. III – SEMESTER REGULAR EXAMINATIONS, DEC-2017
URBAN COMMUNITY DEVELOPMENT-I
PAPER – IV (a)

Time: 3 Hours]   [Max. Marks: 70

Note: Answer all questions from Section – A and Section – B

<u>Section – A</u>   (5x4=20)

Answer the following questions in not more than **ONE** page each:

1. Define Urban Community Development.
2. Describe the concept of Migration.
3. What are the characteristic of Slums?
4. Explain the structure of urban municipal administration.
5. Discuss the trends in Urban Planning.

<u>Section – B</u>   (5x10=50)

Answer the following questions in not more than **FOUR** pages each:

6. a) Write an essay on Urban Community Development in India.
    (OR)
    b) Discuss the various strategies of urban community development.

7. a) Explain the relationship between Urbanization and Industrialization.
    (OR)
    b) What are the current issues in Urban India? As a social worker how would you tackle?

8. a) Define Slums. Explain the slums in Telangana.
    (OR)
    b) Explain the role of social worker in urban slum improvement programme.

9. a) Explain the functions and current issues in urban municipal administration.
    (OR)
    b) Role of voluntary agencies in urban community development.

10. a) Write essay on major policies of urban development in India.
    (OR)
    b) Explain the major laws related to urban development.

--oOo--

FACULTY OF SOCIAL SCIENCES
M.S.W. III – SEMESTER REGULAR EXAMINATIONS, DEC-2017
SOCIAL WORK WITH CHILDREN
PAPER – IV (b)

Time: 3 Hours]   [Max. Marks: 70

Note: Answer all questions from Section – A and Section – B

<u>Section – A</u>   (5x4=20)

Answer the following questions in not more than **ONE** page each:

1. Child Welfare.
2. Child health education.
3. Destitute.
4. Concept of Child labour.
5. Causes of Child abuse.

<u>Section – B</u>   (5x10=50)

Answer the following questions in not more than **FOUR** pages each:

6. a) Discuss the demographic profile of Indian Child?

    (OR)

    b) What constitutional safe guards are provided to children in India?

7. a) Elaborate on the health needs of Children in India?

    (OR)

    b) Discuss about various governmental programmes for children education in India.

8. a) Critically evaluate the services and schemes for Street Children?

    (OR)

    b) Discuss the role of social worker in child development programmes?

9. a) Elaborate on the problems and causes of child labour in India.

    (OR)

    b) Discuss about the legal permissions pertaining to child labour.

10. a) Describe in detail the nature, types and causes of child abuse in India.

    (OR)

    b) Elucidate the social skills needed by a social worker in dealing with child abuse problems.

--oOo--

FACULTY OF SOCIAL SCIENCES
M.S.W. III – SEMESTER REGULAR EXAMINATIONS, DEC-2017
MEDICAL SOCIAL WORK - I
PAPER – IV(c)

Time: 3 Hours]   [Max. Marks: 70

Note: Answer all questions from Section – A and Section – B

<u>Section – A</u>   (5x4=20)

Answer the following questions in not more than **ONE** page each:

1. Concept of Positive health.
2. Health Care.
3. STD.
4. Key factors influencing health care.
5. Ethics of Medical Social Work.

<u>Section – B</u>   (5x10=50)

Answer the following questions in not more than **FOUR** pages each:

6. a) Explain the various models of health. Discuss the role of state government.
                              (OR)
    b) Explain the concept of health? Discuss its changing Philosophy.

7. a) Discuss the health care system in India? Explain the role of central and state
        Government in health care.
                              (OR)
    b) Discuss the Indian System of Medicine? Explain challenges of alternative medicine.

8. a) Discuss the role of medical social worker in a TB Hospital.
                              (OR)
    b) Define Medical Social Work. Analyse its role in the promoting of health
        and preventing of disease.

9. a) What is the role of medical social worker in hospital management.
                              (OR)
    b) Explain about the health and hospital administration.

10. a) Discuss the medical social worker nature and scope of medical social work.
                              (OR)
    b) Discuss the role of social workers in health setting.

--oOo--

FACULTYOF BUSINESS MANAGEMENT
MBA III – SEMESTER REGULAR EXAMINATIONS, DEC- 2017
STRATEGIC MANAGEMENT
PAPER – IV

Time: 3 Hours]   [Max. Marks: 70

Section – A   (5x3=15)

Answer the following questions in not more than **ONE** page each:

1. Define Strategic Management.
2. What is environmental scanning?
3. What is Strategic alliance?
4. What do you mean by weak and crisis ridden firms?
5. What is Benchmarking?

Section – B   (5x8=40)

Answer the following questions in not more than **FOUR** pages each:

6. a) Explain the process of strategic management with the help of chart.
   (OR)
   b) What are the different issues involved in objective setting? How can these issues can be resolved?

7. a) What are the factors that affect organizational appraisal? Explain.
   (OR)
   b) "Restructuring results from the mismatch between the organization and its environment". Explain.

8. a) Distinguish between BCG matrix and GE model.
   (OR)
   b) Explain various vertical and horizontal integration strategies.

9. a) What are the various issues involved in turnaround strategy? Explain.
   (OR)
   b) Explain various strategies for fragmented industries. Explain.

10. a) What are the strategic controls for measuring performance? Explain.
    (OR)
    b) Explain the role of leadership in strategic implementation.

Section – C (Compulsory)   (1x15=15)

Bharat Heavy Electrical Limited (BHEL) is India's largest engineering and manufacturing enterprise, operating in the energy sector, employing more than 42000 people. Established in 1956, it has established its presence in the heavy electrical equipments industry nationally as well as globally. BHEL is one of the navaratnas (lit. nine gems) among the public sector enterprises in India. Its vision is to be 'a world class enterprise committed to enhancing stakeholder value'. Its mission statement is: 'to be an Indian multinational engineering enterprise providing total business solutions through quality products, systems, and services in the fields of energy, industry, transportation, infrastructure, and other potential areas'.

BHEL is a huge organization, manufacturing over 180 products categories into 30 major product groups, catering to the core sectors of power generation and transmission, industry, transportation, telecommunications and renewable energy. It has 14 manufacturing divisions, four power sector regional centres, over 100 project sites, eight service centres and 18 regional offices. It acquires technology at its research and development centres. The operations of BHEL are organized into three business sectors of power, industry and overseas business. Besides the business sector departments, three are the corporate functional departments of engineering and R&D, human resource development, finance and corporate planning and development.

BHEL's turnover hit an all-time high of Rs.18,739 crore, registering a growth of 29 per cent, while net profit increased by 44 per cent to touch Rs.2,415 crore in 2006-07. The company has a comfortable order book position of Rs.55,000 crore for 2007-08 and beyond. The company booked export orders worth Rs.1,903 crore in 2006-07. It is looking forward to US$10 billion exports by 2012 from the present US$ 4 billion. The capital investment plan of BHEL for the 11th National plan period envisages an investment of Rs.3,200 crore, mainly to enhance its manufacturing capacity from 10000MW to 15000MW.

BHEL has formulated a five-year strategic plan with the aim of achieving a sustainable profitable growth, targeting at a turnover of Rs.45,000 crore by 2012. The strategy is driven by a combination of organic and inorganic growth. Organic growth is planned through capacity and capability enhancement, designed to leverage the company's core areas of power, supported by the industry, transmission, exports and spares and services businesses. For the purpose of inorganic growth, BHEL plans to pursue megers and acquisition and joint ventures and grow operations both in domestic and export markets.

BHEL is involved in several strategic business initiatives at present for internationalization. These include targeting the export markets, positioning itself as a reputed engineering, procurement and construction (EPC) contractor globally, and looking for opportunities for overseas joint ventures.

An example of a concentration strategy of BHEL in the power sector is the joint venture with another public enterprise, National Thermal Power Corporation, to perform EPC activities in the power sector. It is to be noted that NTPC as a power generation utility and BHEL as an EPC contractor have worked together on several domestic projects earlier, but without a formal partnership. BHEL also has joint ventures with GE of the US and Siemens AG of Germany. Other strategic initiatives include management contract for Bharat Pumps and Compressors Ltd. and a propose takeover of Bharat Heavy Plates and Vessels, both being sister public sector enterprises.

Despite its impressive performance, BHEL is unable to fulfill the requirements for power equipment in the country. The demand for power has been exceeding the growth and availability. There are serious concerns about energy shortages owing to inadequate generation and transmission, as well as inefficiencies in the power sector. Since this sector is a major part of the national infrastructure, problems in the power sector affect the overall economic growth of the country as well as its attractiveness as a destination for foreign investments. BHEL also faces stiff competition from international players in the power equipment sector, mainly of Korean and Chinese origin. There seems to be an undercurrent of conflict between the two governmental ministries of power and heavy industries. BHEL operates administratively under the Ministry of Heavy Industries, but supplies mainly to the power sector that is under the Ministry of Power. There has been talk of establishing another power equipment company as a part of the NTPC for some time, with the purpose of lessening the burden on BHEL.

Questions:

i) BHEL is mainly formulating and implementing concentration strategies nationally as well as globally, in the power equipment sector. Do you think it should broaden the scope of its strategies to include integration or diversification? Why?

ii) Suppose BHEL plans to diversify its business. What areas should it diversify into? Give reasons to justify your choice.

--oOo--

FACULTY OF BUSINESS MANAGEMENT
IM.B.A. (5YIPGP) III – SEMESTER REGULAR EXAMINATION, DEC- 2017
BASICS OF MARKETING
PAPER – 04

Time: 3 Hours]   [Max. Marks: 70

Section – A   (5x4=20)

1. Answer any five of the following question in not more than **ONE** page each.
    a. Marketing offer
    b. Societal Marketing
    c. Supplier
    d. Packaging
    e. U.S.P.
    f. Need
    g. Delphi Method
    h. Negative demand

Section – B   (5x8=40)

Answer the following question in not more than **FOUR** pages each.

2.   a) Define Marketing and explain the importance of marketing in business?
                    (OR)
     b) Discuss various concepts or marketing with examples.

3.   a) Explain the macro environment of marketing in detail.
                    (OR)
     b) What is marketing Mix? Describe various elements of marketing mix.

4.   a) Define market segmentation, discuss the bases for segmenting the consumer
         markets.
                    (OR)
     b) Define the strategies pertaining to product positioning?

5.   a) Who is a consumer? Elaborate the factors influencing consumer behavior.
                    (OR)
     b) Explain the steps involved in the consumer decision making process?

6.   a) Explain the methods of sales forecasting in detail.
                    (OR)
     b) Define demand and explain the significance of demand in marketing.

Section – C (compulsory)   (1x10=10)

Case Study

        Ashok Jain is a NRI doing job in Australia. Having earned a lot of money there, he has returned to India recently from Australia and is willing to set up a ready to eat snacks business in India. He has got sufficient amount of money to start the business in large scale. But he does not have the knowledge of Indian market. He does not know the behavior of the Indian consumer. He has recruited you as a Marketing manager to take care of marketing activities of his firm.

Q. How do you advise Ashok Jain regarding him closely related environment of the marketing for ready to eat snacks in India? Give your suggestions with suitable examples.

--oOo--

FACULTY OF COMMERCE
M.Com (GENERAL) III–SEMESTER REGULAR EXAMINATIONS, DEC-2017
INTERNATIONAL FINANCIAL MANAGEMENT
PAPER –IV (a)

Time: 3 Hours]   [Max. Marks: 70

Note: Answer all questions from Section – A and Section – B

<u>Section – A</u>   (5x4=20)

Answer the following questions in not more than **ONE** page each:

1. What do you mean by international finance?
2. What is exercise price?
3. What is balance sheet hedge?
4. What is ADR?
5. What is bill of landing?

<u>Section – B</u>   (5x10=50)

Answer the following questions in not more than **FOUR** pages each:

6. a) Explain the responsibilities of finance manager of an MNC.

(OR)

b) The following rate are prevailing in the market.

Spot USD 1=Rs.46.5125/5250
Annualized dollar interest rate   :   4.6/4.9
Annualized rupee interest rate   :   6.5/6.8

Assuming uncovered interest arbitrage holds, what is the forward rate for 3 months likely to be quoted in the market?

7. a) Describe the features of futures contracts.

(OR)

b) Explain how a foreign currency payable may be hedged using options.

8. a) How are internal hedging strategies different from contractual hedges?

(OR)

b) IBM purchased computer chips from NEC, a Japanese electronics concern, and was billed ¥250 million payable in three months. Currently, the spot exchange rate is ¥105/$ and the three-month forward rate is ¥100/$. The three-month money market interest rate is 8% per annum in the US and 7% per annum in Japan. The management of IBM decided to use the money market hedge to deal with this yen account payable. Explain the process of a money market hedge and compute the dollar cost of meeting the yen obligation.

9. a) Discuss the importance international money market instruments.

(OR)

b) Explain the GDR issue mechanism.

10. a) How does export factoring work?

(OR)

b) Explain the types of letter of credit.

--oOo--

FACULTY OF COMMERCE
M.Com (GENERAL) III–SEMESTER REGULAR EXAMINATIONS, DEC-2017
ADVANCED CORPORATE ACCOUNTING
PAPER –IV (b)

Time: 3 Hours]   [Max. Marks: 70

Note: Answer all questions from Section – A and Section – B

<u>Section – A</u>   (5x4=20)

Answer the following questions in not more than **ONE** page each:

1. How to determine the cost of control?
2. State the need for Investment Account.
3. State types of leasing.
4. What are the elements in Continues Trading Account?
5. What are the provisions of RAS-11?

<u>Section – B</u>   (5x10=50)

Answer the following questions in not more than **FOUR** pages each:

6. a) How would you deal with the revaluation of assets and liabilities of the subsidiary while preparing a Consolidated Balance Sheet?

(OR)

b) The Summarized balance sheets of H Ltd and S Ltd.

Balance Sheet as on 31-12-2015

Liabilities	H Ltd. Rs.	S Ltd. Rs.	Assets	H Ltd. Rs.	S Ltd. Rs.
Share Capital of Rs. 100 each	5,00,000	1,00,000	Assets	5,00,000	1,70,000
Reserve	80,000	30,000	8000 shares	1,40,000	-
Profit & Loss A/c	60,000	40,000	Shares in S Ltd.,	-	-
Total:	**6,40,000**	**1,70,000**	**Total:**	**6,40,000**	**1,70,000**

S Ltd., had the credit balance of Rs.30,000 is the Reserve, when H Ltd., acquired shares in S Ltd., decided to make a bonus issue out of pre-acquisition profits of two shares of Rs.10 each fully paid for every five shares held. Calculate the cost of control before and after issue of bonus shares and show consolidated balance sheet after the bonus issue.

7. a) Distinguish between Cum-Interest and Ex-interest and show the accounting treatment.

(OR)

b) From the following details prepare investment account for the year 31st December 2015.
   i)   Opening balance, 6% government bonds, Face value Rs.60,000 and cost Rs.59,000.
   ii) 1-3-2015, 100 units Rs.100 purchased Ex-interest Rs.98.
   iii) 1-7-2015 Sold 200 units out of original holding at Rs.100.
   iv) 1-10-2015 purchased 50 units at Rs.98 Cum-interest.
   v)   1-11-2015 Sold 280 units Ex- interest at Rs.99 out of original holdings.
        Interest dates are 30th September and 31st March every year.

8. a) Explain the Accounting Procedure for leasing transactions.

(OR)

P.T.O

b) X Co Ltd., acquired a machinery on lease from Y Co Ltd., on 1st January 2013. The economic life of the machinery is 3 years and the fair market value of madinery on 1-1-2013 is Rs.7,00,000. The lease payment per annum is Rs.3,00,000. The salvage value of madinery is 20,000 at the end of third year. The implicit rate of interest is 15 percent per annum and the present value factor of 15% in three years is 2.283. compute the value of machinery for lease and the finance charges every year.

9. a) Discuss the accounting treatment for containers are not returnable.

(OR)

b) 0n 1-1-2015 stock of packages in hand was Rs.8000 (Valued in the books at cost less 25%) and Rs.1200 in the hands of customers at invoice.
Price which is cost plus 50%. For the ended 31st December 2015, Packager were changed out at cost plus 50% and full credit was given in respect of those returned in good condition. Packages cent out during the year were Rs.16000 and returns Rs.10,000. Customers retained packages at all invoice price of Rs.300 and closing stock of packages at cost of Rs.6,667 prepare packages stock A/c and Reserve Account.

10. a) Explain the methods of translating financial statements.

(OR)

b) Convert the following total balance as on 31st December 2015 of the calculate branch which has got its head free in London.

Particulars	Debit (Rs.)	Credit (Rs.)
Stock in hand	12,600	-
Purchases & sales	75,000	1,12,500
Debtors & Creditors	27,000	18,000
Bills receivable and payable	7,200	6,300
Wages and Salaries	4,800	-
Rent	3,600	-
Sundry charges	1,500	-
Furniture	5,000	-
Cash at Bank	33,300	-
London Account	-	33,200
	1,70,000	**1,70,000**

Stock on 31-12-2015 was Rs.22,500. Calcutta Branch account in the books of London office showed a debit balance of £ 2280. Furniture appeared in London at £ 350.
The following exchange on:
31-12-2014 – Rs. 14 per £
31-12-2015 – Rs.15 per £
Average rate of the year £14.50

--oOo--

FACULTY OF COMMERCE

M.Com. (E-Commerce) III – SEMESTER REGULAR EXAMINATIONS, DEC-2017

FINANCIAL MARKETS AND SERVICES

PAPER – IV (a)

Time: 3 Hours]   [Max. Marks: 70

Note: Answer all questions from Section – A and Section – B

Section – A   (5x4=20)

Answer the following questions in not more than **ONE** page each:

1. Economic Development.

2. Listing of Companies.

3. UTI.

4. Hire Purchase.

5. Bills discounting.

Section – B   (5x10=50)

Answer the following questions in not more than **FOUR** pages each:

6. a) Describe the structure of the Indian Financial System.
    (OR)
    b) Give an account of the recent developments and challenges in Indian Financial Market.

7. a) Differentiate between primary market and secondary market and which market is more suitable for developing countries.
    (OR)
    b) What is money market? Explain the instruments.

8. a) Do commercial banks help for economic development of the country. Explain.
    (OR)
    b) Define financial services and write its scope and growth.

9. a) What are Mutual Funds? Classify them. Explain the various factors to be considered before selecting a mutual fund.
    (OR)
    b) Define Lasting. Discuss the various types of leases. Distinguish between Financial lease and operating lease.

10. a) Explain the important aspects of the regulatory framework meant for merchant Banking in India.
    (OR)
    b) Elaborate the guidelines of the SEBI on merchant banking activities.

--oOo--

FACULTY OF COMMERCE
M.Com. (E-Commerce) III – SEMESTER REGULAR EXAMINATIONS, DEC-2017
ACCOUNTING FOR MANAGEMENT
PAPER – 04 (b)

Time: 3 Hours]   [Max. Marks: 70

Note: Answer all questions from Section – A and Section – B

<u>Section – A</u>   (5x4=20)

Answer the following questions in not more than **ONE** page each:

1. Accounting Principles.
2. IAS-4.
3. Balanced Score Card.
4. Target Costing.
5. Characteristics of good reporting.

<u>Section – B</u>   (5x10=50)

Answer the following questions in not more than **FOUR** pages each:

6. a) What are the approaches to formulation of Accounting Theory?

(OR)

b) What are the theoretical concepts of accounting?

7. a) What is the need for Accounting Standards?

(OR)

b) Explain the relationship between National and International Accounting Standards.

8. a) What are the objectives of balance score card? Explain the prospective of balance score card.

(OR)

b) Explain the procedure of preparation of responsibility accounting reports.

9. a) Explain the need for emergence of activity based costing.

(OR)

b) MNP suits is a ready-to-wear suit manufacturer. It has four customers, two wholesale-channel customers and two retail-channel customers.
MNP suits has developed the following activity-based costing system:

Activity	Cost driver	Rate in 2004
Order processing	Number of purchase orders	Rs.1,225 per order
Sales visits	Number of customer visits	Rs.7,150 per visit
Delivery-regular	Number of regular deliveries	Rs.1,500 per delivery
Delivery-rushed	Number of rushed deliveries	Rs.4,250 per delivery

P.T.O

List selling price per suit is Rs.1,000 and average cost per suit is Rs.550. The CEO of MNP suits want to evaluate the profitability of each of the four customers in 2003 to explore opportunities for increasing profitability of his company in 2004. The following data are available for 2003:

Item	Whole Sale customers		Retail Customers	
	W	H	R	T
Total number of orders	44	62	212	250
Total number of sales visits	8	12	22	20
Regular deliveries	41	48	166	190
Rush deliveries	3	14	46	60
Average number of suits per order	400	200	30	25
Average selling price per suit	Rs.700	Rs.800	Rs.850	Rs.900

Required:
i) Calculate the customer-level operating income in 2003.
ii) What do you recommend to CEO of MNP suits to do to increase the company's operating income in 2004?
iii) Assume MNP suits' distribution channel costs are Rs.17,50,000 for its wholesale customers and Rs,10,50,000 for the retail customers. Also, assume that its Corporate sustaining costs are Rs.12,50,000. Prepare Income Statement of MNP suits for 2003.

10. a) What is Corporate reporting? Explain its objectives.

(OR)

b) Discuss the International Financial Reporting System (IFRS).

--oOo--

FACULTY OF SCIENCE

M.Sc. (Applied Statistics) III – SEMESTER REGULAR EXAMINATIONS, DEC-2017

STATISTICAL PROCESS AND QUALITY CONTROL

PAPER-IV

Time: 3 Hours]   [Max. Marks: 70

Note: Answer all questions from Section – A and Section – B

<u>Section – A</u>   (5x4=20)

Answer the following questions in not more than **ONE** page each:

1. Discuss about the process capability.

2. Differentiate between c-chart and u-chart.

3. Describe the procedure of designing a single sampling plan.

4. Write a note on use of control ellipsoid.

5. Write a note on TQM.

<u>Section – B</u>   (5x10=50)

Answer the following questions in not more than **FOUR** pages each:

6. a) Explain the term "Statistical Process Control" and its need.

(OR)

 b) Discuss the construction and operation of mid range chart for monitoring the process variability.

7. a) Discuss the OC curve associated with moving arrange chart.

(OR)

 b) Explain the properties and uses of EWMA control chart.

8. a) Discuss Dodge-Roming Plans that provide AOAL.

(OR)

 b) Explain double sampling plan. Describe the competition of O.C. curve for the plan.

9. a) What is Process Capability? Explain different types of process capability indices.

(OR)

 b) Define utility function. What are the utility functions of a multivariate control chart when the process parameters as known and unknown.

10. a) What are the underlying assumptions in CUSUM control charts? How do you improve CUSUM responsiveness for large shifts?

(OR)

 b) Derive Confidence limits for process capability ratios.

--oOo--

FACULTY OF SCIENCES
M.Sc. (Biotechnology) III – SEMESTER REGULAR EXAMINATIONS, DEC-2017
**INTELLECTUAL PROPERTY RIGHTS,
ENTERPRENEURSHIP, ETHICS AND RESEARCH METHODOLOGY**
PAPER – IV

Time: 3 hours]   [Max. Marks: 70

Note: Answer all questions from Section – A and Section – B

Section – A

Answer the following questions in not more than **ONE** page each: (5x4=20)

1. History of IPR in India
2. Describe Project Concept
3. Discuss network analysis
4. Statistical approach to research
5. Good manufacturing practices

Section – B

Answer the following questions in not more than **FOUR** pages each: (5x10=50)

6.   a) Describe Rights of Patents.

                         (OR)

   b) Discuss:
     i) Infringement of patent rights.   ii) Emerging issues in patents

7.   a) Explain Processes of project report and project appraisal.

                         (OR)

   b) Write short notes on:
     i) Product Planning and development   ii) Variables in experiments

8.   a) Elaborate on ethical issues.

                         (OR)

   b) Write short note on:
     i) Professional Ethics   ii) GLP

9.   a) Evaluation methods of Progress in research.

                         (OR)

   b) Explain:
     i) Laboratory accreditation   ii) Encyclopedia, Websites

10. a) Describe about Literature Search.

                         (OR)

   b) Elaborate on:
     i) Applied & Basic research   ii) Identification of research problem

--oOo--

FACULTY OF SCIENCES
M.Sc. (BOTANY) III – SEMESTER REGULAR EXAMINATION, DEC- 2017
PLANT TISSUE CULTURE & BIOTECHNOLOGY

PAPER – 04

Time: 3 hours]   [Max. Marks: 70

Note: Answer all questions from Section – A and Section – B

Section – A

Answer the following questions in not more than **ONE** page each: (5x4=20)

1. Explain the Suspension Cultures and Callus culture.
2. Give a brief account of Synthetic seeds.
3. Describe the Multiple shoot production?
4. Explain the role of Cryopreservation in conservation of Germplasm?
5. Write a brief note on Hairy root cultures.

Section – B

Answer the following questions in not more than **FOUR** pages each: (5x10=50)

6. a) Give an overview of basic concepts of Biotechnology?

(OR)

   b) Describe the various techniques used in Plant Tissue Culture?

7. a) Discuss the induction of rooting and establishment of regenerated shoots in Tissue Culture?

(OR)

   b) Explain the *in vitro* plant regeneration through Embryogenesis?

8. a) What are haploids? Describe their role in crop improvement?

(OR)

   b) Give an account of Protoplast isolation and fusion?

9. a) Write an account of *in vitro* production of secondary metabolism of Industrial importance?

(OR)

   b) Give an account of application of Micropropagation in Forestry?

10. a) Describe the various Meristem Cultures employed in Plant Tissue Culture?

(OR)

   b) Discuss the role of various Phytohormones used in Plant Tissue Culture?

--oOo--

FACULTY OF SCIENCES

M.Sc. (GEOINFORMATICS) III – SEMESTER REGULAR EXAMINATIONS, DEC- 2017

GEOINFORMATICS FOR URBAN AND REGIONAL PLANNING

PAPER – IV

Time: 3 hours]   [Max. Marks: 70

Note: Answer all questions from Section – A and Section – B

Section – A

Answer the following questions in not more than **ONE** page each: (5x4=20)

1. Concept of Planning Region
2. Urban Crime
3. Indications of Development
4. Nature of Town Planning
5. Urban Growth

Section – B

Answer the following questions in not more than **FOUR** page each: (5x10=50)

6. a) Compare and Contrast the models of Urban Land Use?

(OR)

b) Explain in detail the Patterns of Growth of Urban Population and Urban Centers.

7. a) Write a detailed note on Urban Waste Management?

(OR)

b) Explain the role of Remote Sensing and GIS in Urban Studies.

8. a) What is Regional Planning? Write in detail about regional hierarchy and methods of regional delineation.

(OR)

b) Explain Regional Planning in Telangana. Does regional imbalances exist in the state of Telangana?

9. a) Write a detailed note on the Evolution and Scope of Town Planning in India?

(OR)

b) Write a note on GPS Application in Urban and Regional Planning.

10. a) What is a Master Plan? Explain in the context of Hyderabad?

(OR)

b) Discuss the growth of Urbanization in the World?

--oOo--

FACULTY OF SCIENCE

M.Sc. CHEMISTRY (OC) III – SEMESTER REGULAR EXAMINATIONS, DEC-2017

PHOTOCHEMISTRY, SYNTHETIC STRATEGIES AND GREEN CHEMISTRY

PAPER – IV (a)

Time: 3 Hours]   [Max. Marks: 70

Note: Answer all questions from Section – A and Section – B

<u>Section – A</u>   (5x4=20)

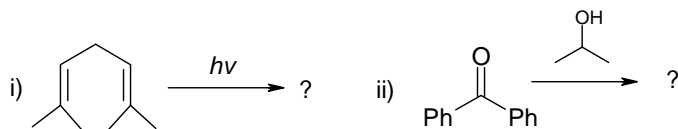Answer the following questions in not more than **ONE** page each:

1. Discuss the Barton reaction.
2. Explain the following terms:
     i) Disconnection approach; ii) Synthetic equivalent.
3. Explain C-C disconnection of Diels-Alder reaction.
4. What are ionic liquids, discuss with suitable examples.
5. What is photo stationary state, explain with an example.

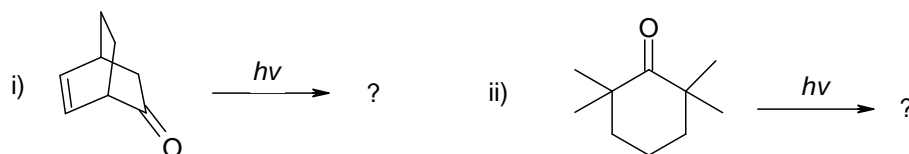<u>Section – B</u>   (5x10=50)

Answer the following questions in not more than **FOUR** pages each:

6. a) Complete the following mechanism:

(OR)

   b) Discuss Paterno-Buchi reaction with suitable example.

7. a) Discuss the criteria for the selection of target molecule.

(OR)

   b) Briefly account linear and convergent synthesis.

8. a) Explain Robinson annulations and Michael addition with retro-synthetic analysis.

(OR)

   b) Discuss retrosynthesis of (+) Disparlure.

9. a) Discuss general principles on green chemistry.

(OR)

   b) Briefly account the microwave assisted reactions in water with example.

10. a) Predict the products and suggest mechanism for the following:

(OR)

   b) What is organo-catalysis? Discuss using Aldol reaction.

--oOo--

FACULTY OF SCIENCE
M.Sc. (CHEM-PCH-2YPGP) III – SEMESTER REGULAR EXAMINATIONS, DEC- 2017
PHARMACEUTICS, QUALITY CONTROL & QUALITY ASSURANCE
PAPER – 04 (b)

Time: 3 Hours]   [Max. Marks: 70

Note: Answer all the following questions from Section-A and Section-B

<u>Section – A</u>   (5x4=20)

Answer all the following questions in not more than **ONE** page each:

1. Define sensitivity and specificity.

2. Write about buffers in biological system.

3. Write about refractive index and its significance in formulation.

4. Write a note on standard operating procedure.

5. Write about ointment bases.

<u>Section – B</u>   (5x10=50)

Answer all the following questions in not more than **FOUR** pages each:

6. a) Classify and explain different types of errors in pharmaceutical analysis.
   (OR)
   b) Define validation. Write about analytical validation parameters.

7. a) i) Write about buffer capacity and write a note on Van Slyke equation.
   (OR)
   b) i) Define isotonicity.
      ii) Write about pH Vs Stability & pH Vs Solubility.

8. a) Write about evaluation of tablets.
   (OR)
   b) Define Viscosity. Write about Ostwald viscometer and falling sphere viscometer.

9. a) i) Define standard operating procedure.
      ii) Write about quality assurance manuals.
   (OR)
   b) Write a note on Good Laboratory Practices.

10. a) i) Write a short note on suppositories.
       ii) Define Thixotropy.
    (OR)
    b) Write about applications of measuring viscosity.
    --oOo--

FACULTY OF SCIENCE
M.Sc. (PCH-5YIPGP) III-SEMESTER REGULAR EXAMINATIONS, DEC-2017
PHARMACEUTICAL ANALYSIS
PAPER – IV

Time: 3 Hours]   [Max. Marks: 70

Note: Answer all the following questions from Section-A and Section-B

Section – A   (5x4=20)

Answer the following questions in not more than **ONE** page each:
1. Explain the sampling procedures for the analysis of a sample?
2. Write a note on the solvents used in non-aqueous titrations?
3. Mention the methods to increase the selectivity in the EDTA titrations?
4. Write a note on stationary phases used in TLC.
5. Write about redox indicators?

Section – B   (5x10=50)

Answer the following questions in not more than **FOUR** pages each:

6 a) Explain the terms with examples?
      i) Accuracy   ii) Precision   iii) Calibration
                              (OR)
   b) Write about
      i) Type of analysis   ii) Principles of sample preparation

7 a) Write the principle and procedure involved in assay of benzoic acid?
                              (OR)
   b) Explain the principle, procedure in the assay of sodium acetate?

8 a) Explain the Mohr method of titration with examples?
                              (OR)
   b) Explain about theory, method and application of complexometric titration.

9 a) Explain the concept of resolution, Rf value and add a note on mobile phase in TLC.
                              (OR)
   b) Discuss about principle involved in adsorption column chromatography and its
       applications?

10 a) Describe Beer-Lambert's law and its deviations?
                              (OR)
   b) Define and describe
      i) Bathochromic shift   ii) Hypsochromic shift   iii) Hyperchromic shift
      iv) Hypochromic shift   v) Chromophores & auxochromes.
                              --oOo--

FACULTY OF SCIENCE

M.Sc. (PHYSICS/PE) III – SEMESTER REGULAR EXAMINATIONS, DEC-2017

MICROPROCESSORS AND INTERFACING

PAPER – IV

Time: 3 Hours]   [Max. Marks: 70

Note: Answer all the following questions from Section – A and Section – B

<u>Section – A</u>   (5x4=20)

Answer the following questions in not more than **ONE** page each:

1. What is an interrupt and explain hardware interrupts?
2. Explain different segment registers used by 8086.
3. Draw the internal block diagram of priority interrupt controller and mention its internal parts.
4. Explain and draw FM & MFM data encoding.
5. Explain BIOS serial port services.

<u>Section – B</u>   (5x10=50)

Answer the following questions in not more than **FOUR** pages each:

6 a) Explain arithmetic and bit manipulation instructions of 8086.

(OR)

   b) Draw the pin diagram of 8086 and discuss its common signals.

7 a) Draw the internal block diagram of programmable interval timer 8254 and explain its modes of operation.

(OR)

   b) What is the advantages of Parallel I/O in Communication and explain how handshake I/O is superior than strobe I/O?

8 a) Draw the block diagram of functional blocks of mother board of a DC and mention its parts.

(OR)

   b) Distinguish between IDE and SCSI interface.

9 a) Draw and explain internal structure of Pentium-pro micro-processor.

(OR)

   b) Explain the basic operation of USB device.

10 a) Explain 16-bit ISA Bus and mention its limitations.

(OR)

   b) Draw the internal block diagram of 8086 Microprocessor.

--oOo--

FACULTY OF SCIENCE

M.Sc. (MATHEMATICS) III – SEMESTER REGULAR EXAMINATIONS, DEC-2017

INTEGRAL EQUATIONS

PAPER – IV

Time: 3 Hours] [Max. Marks: 70

Note: Answer all questions from Section – A and Section – B

<u>Section – A</u> (5x4=20)

Answer the following questions in not more than **ONE** page each:

1. Form integral equation corresponding to the differential equation
   $y'' + (1 + x^2)y = cosx, y(0) = 0, \quad y'(0) = 0.$
2. Find the resolvent Kernel for Volterra integral equation with Kernel k(x,t)=cos$h$(x-t), λ=1.
3. Obtain Fredhom integral equation of second kind corresponding t the boundary value problem
   $\frac{d^2\emptyset}{dx^2} + \lambda\phi = x, \phi(0) = 0, \ \phi^1(1) = 0.$
4. Define Greens function and write its four properties.
5. Show that the characteristic numbers of a finite integral equation with real symmetric Kernel are real.

<u>Section – B</u> (5x10=50)

Answer the following questions in not more than **FOUR** pages each:

6. a) Solve the integral equation with the aid of resolvent Kernel
   $\phi(x) = e^{x^2+2x} + 2\int_0^x e^{x^2-t^2}\phi(t)dt.$
   (OR)
   b) Using the method of successive approximation, solve the integral equation.
   $\phi(x) = 1 + \int_0^x (x - t)\phi(t)dt, \phi_0(x) = 1.$

7. a) Solve the integro-differential equation:
   $\phi''(x)\int_0^x e^{2(x-t)}\phi'(t)dt = e^{2x}, \phi(0) = 0, \phi'(0) = 1.$
   (OR)
   b) Solve the integral equation $\int_0^x \cos(x - t)\,\phi(t)dt = x + x^2.$

8. a) Using the resolvent Kernel, solve the integral equation: $\phi(x) - \int_0^{2\pi} sinx \, cost \, \phi(t)dt = cos2x.$
   (OR)
   b) Solve the integral equation with degenerate Kernels $\phi(x) - \lambda \int_0^\pi sin(x - t)\,\phi(t)dt = \cos x.$

9. a) Construct Green's function for the boundary value problem:
   $y''(x) + k^2y = 0, y(o) = y(1) = 0.$

   (OR)

   b) Explain Schmidt's solution of the non-homogeneous integral equation.

10. a) Find the resolvent Kernel for the following Kernel k(x,t) = sin x cos t, a=0, b=$\frac{\pi}{2}$.
    (OR)
    b) Find the characteristic numbers and Eigen functions of the homogeneous integral equation
    $\phi(x) - \lambda \int_0^1 (2xt - 4x^2)\phi(t)dt = 0.$

--oOo--

FACULTY OF SCIENCES
M.Sc. (Zoology) III – SEMESTER REGULAR EXAMINATIONS, DEC- 2017
PARACYTOLOGY-I
PAPER – IV

Time: 3 Hours]   [Max. Marks: 70

Note: Answer all questions from Section – A and Section – B

<u>Section – A</u>   (5x4=20)

Answer the following questions in not more than **ONE** page each:

1. Sense Organs
2. Morphology of larval forms
3. Pathogencity, diagnosis and treatment of Hymenolepis nana
4. Protein Composition
5. Disperson Concept

<u>Section – B</u>   (5x10=50)

Answer the following questions in not more than **FOUR** pages each:

6. a) Give an account on ultra structure and functions of Tegument.

(OR)

   b) Explain digestive system, feeding and mechanism of digestion in Trematodes and Cestodes.

7. a) Explain reproductive system of Cestodes.

(OR)

   b) Discuss the role of helminthes parasites as vectors of microbial infection.

8. a) Explain the Morphology, life cycle, Pathogencity, diagnosis, treatment and control measures of Hydatid worm.

(OR)

   b) Describe Trematode and Cestode Parasites of wild animals with emphasis on Dicrocoelium dendriucum.

9. a) Explain Carbohydrate metabolism in Parasites.

(OR)

   b) Explain role of Arthropods and Molluscs in spreading of helminthes diseases.

10. a) Give an account on host parasite interactions and their significance.

(OR)

   b) Explain about origin and evolution of Monogenea and Aspidogastrea.

--oOo--

FACULTY OF SCIENCES
MCA III – SEMESTER REGULAR EXAMINATIONS, DEC- 2017
OPERATING SYSTEMS
PAPER – IV

Time: 3 hours]   [Max. Marks: 70

Note: Answer all questions from Section – A and Section – B

Section – A

Answer the following questions in not more than **ONE** page each: (5x4=20)

1. What is System Call? Discuss in brief.

2. Discuss Directory Structure.

3. Write about Resource Allocation Graph.

4. Explain in brief about Stable Storage Implementation.

5. Briefly discuss Linux Security Model.

Section – B

Answer the following questions in not more than **FOUR** page each: (5x10=50)

6. a) Discuss various Scheduling Algorithms and list out advantages and disadvantages.

(OR)

   b) What are the advantages of Multithreaded Programming? Discuss different Multithreading Models.

7. a) Write about File Allocation Methods.

(OR)

   b) Discuss in detail about Demand Paging.

8. a) Write about Deadlock Handling Methods.

(OR)

   b) Discuss Reader Writer Problems and provide solution using a Semaphore.

9. a) Write about Kernel I/O Sub system and Application I/O interface.

(OR)

   b) Explain in detail about Swap Space Management.

10. a) Write about Design Principles of Windows XP.

(OR)

   b) Explain the File System and Memory Management in Linux.

--oOo--