

FACULTY OF ARTS  
M.A. (ENGLISH) I – SEMESTER REGULAR EXAMINATIONS, DEC-2017  
**ENGLISH LITERATURE UPTO THE EARLY 17<sup>TH</sup> CENTURY - II**  
PAPER – III

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. Why was there a need for translating the Bible in the first place?
2. Characterise the three daughters in Shakespeare's *King Lear*.
3. Characterise the Prospero in Shakespeare's *The Tempest*.
4. Summarise John Donne's *The Canonization*.
5. Summarise Richard Lovelace's *To Althea from Prison*

Section – B

(5x10=50)

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

6. a) Write about the most popular versions of Bible translations.  
(OR)  
b) What are 'Comedy of Manners' and 'Comedy of Humours'? Explain in detail.
7. a) Is Lear a sympathetic character? How do we change our impressions during the Course of the play Shakespeare's *King Lear*?  
(OR)  
b) The theme of 'death' in Shakespeare's *Hamlet*.
8. a) Write briefly the plot involving Sycorax and Caliban in Shakespeare's *The Tempest*.  
(OR)  
b) How are disguises thematically important in Shakespeare's *Twelfth Night*?
9. a) Explain the following lines from John Donne's *The Good Morrow* in the context of his poem.  

Let maps to other, worlds on worlds have shown,  
Let us possess one world, each hath one, and is one.  
My face in thine eye, thine in mine appears,  
And true plain hearts do in the faces rest;

(OR)

b) Comment on the form and imagery of George Herbert's Poem *Pulley*.
10. a) Analyse Andrew Marvell's Poetry.  
(OR)  
b) Richard Lovelace's *To Althea from Prison* is all about mind over matter. Explain.

FACULTY OF ARTS  
M.A.(HND) I – SEMESTER REGULAR EXAMINATIONS, DEC-2017  
AADHUNIK HINDI GADYA SAHITYA-I  
PAPER – III

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. उत्साह की परिभाषा दीजिए ।
2. पथ के साथी में किन-किन सहित्यकारों का परिचय है?
3. प्रेमचंद के उपन्यास-कला पर टिप्पणी लिखिए ।
4. श्रद्धा और भक्ति में शुक्ल जी क्या कहना चाहते हैं?
5. 'गोदान' में धनिया का चरित्र-चित्रण कीजिए ।

Section – B

सूचना - निम्न लिखित प्रश्नों के उत्तर 4 पृष्ठों से अधिक न हो ।

(5x10=50)

6. a) 'गोदान' में कृषक-जीवन का यथार्थ-चित्र खींचा गया है, विवेचन कीजिए ।  
(OR)  
b) 'गोदान' के विषय वस्तु लिखते हुए उसके भाषा-शैली पर प्रकाश डालिए ।
7. a) उत्साह की परिभाषा देते हुए, रामचंद्र शुक्ल के द्वारा वर्णित उसके कथ्य पर प्रकाश डालिए ।  
(OR)  
b) 'पथ के साथी' के किसी एक चरित्र की विशेषताओं को सोदाहरण बताइए ।
8. a) 'मानसरोवर' के आधार पर प्रेमचंद की किसी एक कहानी पर प्रकाश डालिए ।  
(OR)  
b) कहानी का उद्भव व विकास का वर्णन कीजिए ।
9. a) महादेवी के संस्मरण-यात्रा के विकास को 'पथ के साथी' के आधार पर समझाइए ।  
(OR)  
b) 'पथ के साथी' में सुभद्रा कुमारी चौहान अध्याय में वर्णित संस्मरण की विशेषता बताइए ।
10. a) रामचंद्र शुक्ल की निबंध कला पर एक लेख लिखिए ।  
(OR)  
b) महादेवी-वर्मा के साहित्यिक विकास पर प्रकाश डालिए ।

FACULTY OF SOCIAL SCIENCES  
MCN I – SEMESTER REGULAR EXAMINATIONS, DEC- 2017  
**BASICS OF ELECTRONIC MEDIA**  
PAPER – III

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. Prasar Bharathi
2. Radio Programme formats
3. Elaborate the Field Production
4. Write a proposal for Public Service Message
5. Linear and Non-Linear Editing

Section – B

(5x10=50)

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

6. a) History of All India Radio.  
(OR)  
b) Write the Broadcast regulation and policy issues in India.
7. a) Explain the Role of Radio Producer, Planning and execution.  
(OR)  
b) Describe the Radio Production crew and their functions?
8. a) Describe Television Studio and Field Productions?  
(OR)  
b) Sketch the TV Studio Three-Point lighting and explain it?
9. a) Elaborate the Elements of the Television Production?  
(OR)  
b) What are the differences between story board and script?
10. a) Explain the Linear and Non-Linear editing features and techniques.  
(OR)  
b) Write a script on Right to Education for TV documentary.

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FACULTY OF ARTS  
M.A.(TSD) I – SEMESTER REGULAR EXAMINATIONS, DEC-2017  
INDIAN POETICS-AESTHETICS  
**PAPER – III**

Time: 3 hours]

[Max. Marks: 70

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

**Section – A**సూచన: క్రింది ప్రశ్నలకు ఒకపేజీ మించకుండా సమాధానాలు వ్రాయండి.

(5x4=20)

1. కవి
2. ఏకరస వాదం
3. అలంకార ధ్వని
4. కళాతత్త్వికులు
5. కళాహేతువు

**Section – B**సూచన: క్రింది ప్రశ్నలకు నాలుగు పేజీలు మించకుండా సమాధానాలు వ్రాయండి.

(5x10=50)

6. a) కావ్యాన్ని నిర్వచించి దానికి కావలసిన హేతువులను తెల్పండి.  
(లేదా)  
b) కావ్యాత్మ వాదాలను వివరించండి.
7. a) రస సంఖ్యను చర్చించి శాంతం రసం అవుతుందా? వివరించండి.  
(లేదా)  
b) 'రసనిష్ఠ' ను చర్చించండి.
8. a) శబ్ద వృత్తులను వివరించండి.  
(లేదా)  
b) ధ్వని నిర్వచించి వస్తు అలంకార రస ధ్వనులను సోదాహరణంగా వివరించండి.
9. a) కళాతత్త్వశాస్త్ర విషయంలో భారతీయుల కృషిని వివరించండి.  
(లేదా)  
b) కళాతత్త్వికులుగా ఆలంకారికుల స్థానాన్ని వివరించండి.
10. a) సౌందర్యం యన్నిష్ఠం? చర్చించండి.  
(లేదా)  
b) కళాతత్త్వంలో ప్రతీకల పాత్రను వివరించండి.

FACULTY OF ARTS  
M.A. URDU I- SEMESTER REGULAR EXAMINATIONS, DEC 2017  
**URDU GHAZAL**  
PAPER -III

Time: 3 Hours]

[Max. Marks: 70

نوٹ: حصہ الف اور حصہ ب کے تمام سوالوں کے جواب مطلوب ہیں۔  
(حصہ الف)

نوٹ:- درج ذیل سوالات کے جوابات تحریر کیجیے۔  
(5 x 4 = 20)  
کوئی جواب ایک صفحے سے زائد نہ ہو۔

- 1:- غزل کی تعریف کیجیے اور اس کے اجزائے ترکیبی پر روشنی ڈالیں۔
- 2:- دکنی غزل کی امتیازی خصوصیات بیان کیجیے۔
- 3:- غالب کے سوانحی حالات کا اجمالی جائزہ لیجیے۔
- 4:- اردو غزل کے نشاۃ ثانیہ سے کیا مراد ہے۔
- 5:- نئی غزل کے بارے میں اپنی معلومات قلم بند کیجیے۔  
(حصہ ب)

نوٹ:- درج ذیل سوالات کے جوابات تحریر کیجیے۔ کوئی جواب  
چار صفحات سے زائد نہ ہو۔  
(5 x 10 = 50)

- 6:- آتش کی غزل گوئی کی اہم خصوصیات پر روشنی ڈالیں۔  
(یا)
- علامہ اقبال کی شاعری کی امتیازی خصوصیت پر نوٹ لکھیے۔
- 7:- اردو میں غزل کے آغاز و ارتقا کا جائزہ لیجیے۔  
(یا)
- میر تقی میر کی غزل گوئی پر تفصیلی نوٹ لکھیے۔

8 :- جانے کا نہیں شور سخن کا مرے ہرگز تاحشر جہاں میں مراد لیوان رہے گا۔  
میر کے اس دعوے کا محاکمہ کیجئے۔  
(یا)

غالب کی غزل کی فکری و فنی جہتوں کا ناقدا نہ جائزہ لیجئے۔

9 :- اردو غزل کے احیاء میں غانی کی خدمات کا احاطہ کیجئے۔

(یا)  
امیر گوئدوی کے رنگ تغزل کے امتیازات واضح کیجئے۔

10 :- اردو کے اہم ترقی پسند غزل گو شعرا کا تعارف کرایئے۔

(یا)  
نئی غزل کے علمبردار شعرا کی امتیازی خصوصیات اجاگر کیجئے۔

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FACULTY OF SOCIAL SCIENCES  
M.A (Economics) I– SEMESTER REGULAR EXAMINATIONS, DEC-2017  
**QUANTITATIVE METHODS - I**  
PAPER – III

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. Cubic Function
2. Cobb-Douglas Production Function
3. Gini-Coefficient
4. Partial and Multiple Correlations
5. Cost of Living Index Number

**Section – B**Answer the following questions in not more than **FOUR** page each:

(5x10=50)

6. a) What are the Rules of Differentiation? Explain.  
(OR)  
b) Find the derivatives of  
i)  $y = 3x^3 + 2x^2 - 4x + 10$     ii)  $y = (2x + 3)(x^2 + x)$
7. a) Explain the different steps in finding the Maxima and Minima in a given function.  
(OR)  
b) Find the partial derivatives for the following functions.  
i)  $u = x^3y + xy^5$     ii)  $u = e^{xy}$
8. a) What are the Random Sampling Methods of Collecting Data? Explain.  
(OR)  
b) Calculate Quartile Deviation for the following data.

Marks:	0-10	10-20	20-30	30-40	40-50
Frequency:	6	8	12	9	5

9. a) Write the uses and limitations of correlation.  
(OR)  
b) Calculate the coefficient of correlation for the following data.

X:	5	7	8	4	9	3	2	5	4	3
Y:	2	4	5	5	6	5	4	4	3	2

10. a) What are the uses and limitations of Index Number? Explain.  
(OR)  
b) Construct Fisher Index for the following data.

Item	$P_0$	$q_0$	$P_1$	$q_1$
A	2	40	5	75
B	4	16	8	40
C	1	10	2	24
D	5	25	10	60

FACULTY OF SOCIAL SCIENCES  
M.A. (Political Science) I – SEMESTER REGULAR EXAMINATIONS, DEC-2017  
**INDIAN POLITICAL SYSTEM**  
PAPER – III

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. Constituent Assembly
2. Right to Freedom
3. Federal Features
4. Emergency Power of the President
5. Judicial Activism

**Section – B**

(5x10=50)

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

6. a) Explain the Marxist Approach.  
(OR)  
b) Discuss the Historical Legacies to making of the Indian Constitution.
7. a) Describe the Philosophy of the Indian Constitution.  
(OR)  
b) Distinguish between Fundamental Rights and Directive Principles of State Policy.
8. a) Examine the characteristics of Unitary Features of the Indian Political System.  
(OR)  
b) Critically evaluate Union and State Relations.
9. a) Explain Powers and Functions of Indian Parliament.  
(OR)  
b) How the coalition Governments are working in Indian Political System.
10. a) Discuss Powers and Functions of Indian Judiciary.  
(OR)  
b) Explain the Judicial Review.



FACULTY OF SOCIAL SCIENCES  
M.A. (Public Administration) I – SEMESTER REGULAR EXAMINATIONS, DEC-2017  
**COMPARATIVE AND DEVELOPMENT ADMINISTRATION**  
PAPER –III

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. Characteristic of comparative Public Administration.
2. Decision Making approach.
3. Development Models.
4. Classical Administrative System of France.
5. Development Administration.

**Section – B**

(5x10=50)

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

6. a) Write an essay on nature and scope of Comparative Public Administration.  
(OR)  
b) Discuss about the evolution of Comparative Public Administration.
7. a) Explain about the General System Approach.  
(OR)  
b) Discuss about the Bureaucratic Approach.
8. a) Critically explain about the theory of Prismatic Society.  
(OR)  
b) Critically explain about the evolution of Development Models.
9. a) Write an essay on Developing Administration System in India.  
(OR)  
b) Explain about the Developed Administrative System of USA & UK.
- 10.a) Explain the goals and challenges of Development Administration.  
(OR)  
b) Write a note on Sustainable Development and Human Development.

FACULTY OF BUSINESS MANAGEMENT  
MBA I – SEMESTER REGULAR EXAMINATIONS, DEC- 2017  
**ACCOUNTING FOR MANAGERS**  
PAPER – III

Time: 3 Hours]

[Max. Marks: 70  
(5x4=20)**Section – A**Answer the following questions in not more than **ONE** page each:

1. Dual aspect Concept.
2. Prepaid Expenses.
3. Current Assets.
4. Uses of funds.
5. Economic Accounting.

**Section – B**

(5x8=40)

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

6. a) Describe accounting as an information system.

(OR)

- b) From the following transactions prepare subsidiary books and post them into Ledger:

Date	Particulars	Amount Rs.
2016 Jan. 1	Purchased goods from Anil enterprises	2,800
Jan. 03	Bought goods on credit from Jaya Traders from	12,000
Jan. 05	Sold goods to Sunil & Co. for	6,000
Jan. 07	Y supplies us goods for cash	4,800
Jan. 08	X sold goods for cash	1,500
Jan. 10	Goods returned to Anil Enterprises	500
Jan. 17	Goods returned by Rao & Co.	240
Jan. 22	Dispatched goods to Sun & Co.	4,000
Jan. 27	Sold goods to Ganapathi Stores Ltd.	500
Jan. 28	Bought goods from Krish & Co.	1,000

7. a) Explain the rationale of making adjustments at the time of preparing final accounts.

(OR)

- b) The following are the balances extracted from the books of Mr. Mohith as on 31.03.2017.

Particulars	Rs.	Particulars	Rs.
Capital	30,000	Buildings	22,500
Machinery	15,000	Furniture	1,500
Motor car	12,000	Opening stock	24,000
Purchases	1,11,000	Purchase returns	1,500
Sales	2,10,000	Sales returns	750
Sundry debtors	22,500	Sundry creditors	7,200
Cash on hand	450	Cash at bank	7,050
Salaries	21,000	Rent	6,000
Commission	2,100	Taxes	900
Bad debts	300	Insurance Premium	600
Discount earned	750	Discount allowed	1,050
General expenses	1,200	Provision for doubtful debts	450

- a) Outstanding: Salaries Rs.200 Commission Rs.300; Rent Rs.1,200
  - b) Insurance premium prepaid Rs.150.
  - c) Maintain provision for Doubtful debts at 5%.
  - d) Depreciate machinery by 5% p.a., Motor car by 10% p.a., Furniture by 4% and Buildings by 3% p.a.,
  - e) Closing stock as on 31.03.2017 Rs.30,000.
- You are required to prepare Trading and Profit and Loss Account for the year ending 31.03.2017 and Balance Sheet as on date.

[PTO]

8. a) "Ratio analysis is a tool of management for measuring achievements in efficiency and guiding business policies". Discuss.

(OR)

- b) Given: Current Ratio = 2.8  
Acid-test Ratio = 1.5  
Working Capital = Rs.1,62,000

- Find out: i) Current Assets  
ii) Current Liabilities and  
iii) Liquid Assets.

9. a) Distinguish between funds flow and cash flow statement. Explain how the funds from operations are ascertained.

(OR)

- b) Calculate Cash Flow from operating activities by indirect method from the following:

- i) Profit made during the year Rs.2,50,000 after considering the following:

- |                                |        |
|--------------------------------|--------|
| a) Depreciation                | 10,000 |
| b) Amortisation                | 5,000  |
| c) Transfer to General Reserve | 7,000  |
| d) Profit on Sale of land      | 3,000  |

Following is the position of current assets and current liabilities:

	Opening Balance Rs.	Closing Balance Rs.
Debtors	12,000	15,000
Creditors	15,000	10,000
Bills Receivable	10,000	8,000
Prepaid Expenses	6,000	4,000

10. a) Outline the basic principles of Responsibility Accounting.

(OR)

- b) Briefly comment on the status of Green Accounting in India.

**Section – C (Compulsory)**

(1x10=10)

From the following Balance Sheet of Sri Ram Company you are required to prepare

- i) A statement of changes in the working capital and  
ii) A statement of sources and application of funds.

**BALANCE SHEET**

Liabilities	Dec.2015 Rs.	Dec.2016 Rs.	Assets	Dec. 2015 Rs.	Dec. 2016 Rs.
Current Liabilities	30,000	32,000	Cash	40,000	44,400
Bonds Payable	20,000	20,200	Accounts Receivable	10,000	20,700
Capital Stock	35,000	43,500	Inventories	15,000	15,000
Retained Earnings	15,000	19,500	Land	4,000	4,000
			Building	20,000	16,000
			Equipment	15,000	17,000
			Accumulated Depreciation	(5,000)	(2,800)
			Patents	1,000	900
	<b>1,00,000</b>	<b>1,15,200</b>		<b>1,00,000</b>	<b>1,15,200</b>

Additional Information:

- i) Income for the period Rs.10,000  
ii) A building that cost Rs.4,000 and which had a book value of Rs.1,000 was sold for Rs.1,400.  
iii) The depreciation charge for the period was Rs.800.  
iv) There was Rs.5,000 issue of common stock.  
v) Cash dividends Rs.2,000 and Rs.3,500 stock dividend were declared.

FACULTY OF COMMERCE  
M.Com. (Gen/E-Com) I – SEMESTER REGULAR EXAMINATIONS, DEC- 2017  
**MARKETING MANAGEMENT**  
PAPER – III

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. Objectives of Marketing
2. Target marketing
3. Decision
4. Channel Conflict
5. Publicity

Section – B

(5x10=50)

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

6. a) Explain marketing concept? Discuss the difference between selling and marketing?  
(OR)  
b) Explain the term “Rural Marketing”? Discuss the difference between rural and urban markets?
7. a) What is market segmentation? What are the requirements for effective segmentation?  
(OR)  
b) Define Consumer Behaviour? What are the major factors influencing on consumer behaviour.
8. a) What are the objectives of pricing and what factors influence for price determination?  
(OR)  
b) Explain the stages of new product development and its importance in Indian market?
9. a) What are the major types of marketing intermediaries for reaching customers?  
(OR)  
b) Explain the factors influencing channel design decisions?
10. a) Define Advertisement? Explain the need, objectives and types of advertisement.  
(OR)  
b) Explain the objectives and different types of sales promotion tools.

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FACULTY OF COMMERCE  
M.Com. (Gen/E-Com) I – SEMESTER REGULAR EXAMINATIONS, DEC- 2017  
**MARKETING MANAGEMENT**  
PAPER – III

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. Objectives of Marketing
2. Target marketing
3. Decision
4. Channel Conflict
5. Publicity

Section – B

(5x10=50)

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(OR)  
b) Define Consumer Behaviour? What are the major factors influencing on consumer behaviour.
8. a) What are the objectives of pricing and what factors influence for price determination?  
(OR)  
b) Explain the stages of new product development and its importance in Indian market?
9. a) What are the major types of marketing intermediaries for reaching customers?  
(OR)  
b) Explain the factors influencing channel design decisions?
10. a) Define Advertisement? Explain the need, objectives and types of advertisement.  
(OR)  
b) Explain the objectives and different types of sales promotion tools.

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FACULTY OF SCIENCE  
M.Sc.(Applied Statistics) – I SEMESTER REGULAR EXAMINATIONS, DEC-2017  
**DISTRIBUTION THEORY AND ESTIMATION**  
PAPER: III

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 Pareto and Laplace distributions and give their properties.
2. Define  $\chi^2$  distribution. Establish its reproductive properties.
3. Distinguish between point and interval estimation.
4. Define the  $r^{th}$  order statistics.
5. Explain the density function of a poisson distribution truncated at  $\sigma$ .

**Section – B**

[5x10 = 50

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

6. a) Derive the Marginal Distributions of Bivariate Normal distribution.  
(OR)  
b) Define Truncated Normal distribution, truncated beyond  $[-T, T]$  and obtain its mean and variance.
7. a) Derive the Joint probability density of  $r^{th}$  and  $s^{th}$  order statistics.  
(OR)  
b) Define central F-distribution and discuss its properties.
8. a) State and Prove Rao-Black Well Theorem.  
(OR)  
b) Let  $X_1, X_2, \dots, X_n$  be i i d b(1, p) r.v.'s. Then show that  $(n, T-T^2)/n(n-1)$  is the UMVE of  $p(1-p)$  when  $T = \sum_{i=1}^n x_i$ .
9. a) Let  $X_1, X_2, \dots, X_n$  be a sample from  $P(\lambda)$  for estimating  $\lambda$ , using quadratic error loss function, an appriari distribution over  $\theta$ , given by p.d.f.  $\Pi(\lambda) = e^{-\lambda}$ ,  $\lambda > 0$  is used then find the Bayes estimation for  $\lambda$ .  
(OR)  
b) Explain Bayes estimates of parameters in  $N(\theta, \sigma^2)$ .
10. a) Derive the characteristic function of Cauchy distribution.  
(OR)  
b) Obtain a necessary and sufficient condition for the existence of a minimal complete class of decision functions.

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FACULTY OF SCIENCES  
M.Sc. (Biotechnology) I – SEMESTER REGULAR EXAMINATIONS, DEC- 2017  
**BIOCHEMISTRY**  
**PAPER – III**

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. Glycosidic bond
2. Keratin sulphate
3. Prostaglandins
4. Glyoxylate cycle
5. Mixed inhibition

**Section – B**

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

6. a) Write about the bacterial cell wall polysaccharides.  
(OR)  
b) Explain in detail with structures the classification of carbohydrates.
7. a) Write about the structure and functions of heme and chlorophyll.  
(OR)  
b) Explain with diagram various forms of DNA.
8. a) Describe HMP cycle with its energetics.  
(OR)  
b) Explain the process of gluconeogenesis.
9. a) Write about the mechanism of enzymatic action.  
(OR)  
b) Explain various kinds of Enzyme inhibition.
10. a) Explain in detail about Photosystem I and Photosystem II.  
(OR)  
b) Write detailed account on the allosteric regulation.

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FACULTY OF SCIENCES  
M.Sc. (BOTANY) I – SEMESTER REGULAR EXAMINATION, DEC- 2017  
BRYOLOGY, PTERIDOLOGY AND PALEONTOLOGY

**PAPER – 03**

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. Life cycle of *Marchantia*
2. Telome Concept
3. Equisetum Cone L.S.
4. Fossilization
5. Ecology of bryophytes

**Section – B**

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

6. a) Describe the general character of polytrichales.  
(OR)  
b) Write an essay on fossil history of bryophytes.
7. a) Describe the stellar evolution in Pteridophytes.  
(OR)  
b) Write an essay on origin and evolution of early vascular plants.
8. a) Write about the general characters of selaginellaes.  
(OR)  
b) Describe the anatomy of *Isoetes* stem.
9. a) Give the general account of Glossopteridaceae.  
(OR)  
b) Describe different types of fossils and add a note on techniques of paleobotany.
10. a) Describe the evolution of sporophyte in bryophytes.  
(OR)  
b) Write about general account of Psilotales.

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FACULTY OF SCIENCES  
M.Sc. (GEOINFORMATICS) I – SEMESTER REGULAR EXAMINATIONS, DEC- 2017

**FUNDAMENTALS OF REMOTE SENSING**

**PAPER – III**

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. Spatial Resolution
2. Active Remote Sensing
3. Sun-Synchronous Satellite
4. Orthorectification
5. Atmospheric window

**Section – B**

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

6. a) Write detailed note on various types of resolutions and its significance in remote sensing.

(OR)

- b) Explain various techniques involved in Electro Magnetic Radiation interaction with surface of the earth.

7. a) Give a detailed note on Landsat Satellite series and how it differs from IRS series of Satellites in terms of its Resolution?

(OR)

- b) Describe the significance of Ground truth and multi spectral scanning in Remote Sensing.

8. a) Define the term Hyper Spectral Scanning and differentiate between Across track Scanning and Along track Scanning.

(OR)

- b) Describe the salient features of Microwave remote sensing.

9. a) Give a detailed account on Digital Elevation Model and Digital Terrain Model?

(OR)

- b) Explain the concepts of digital photogrammetry in detail.

10. a) Distinguish between Aerial Photography and Satellite Imagery and describe how these contribute in data collection.

(OR)

- b) Give a detailed account of Chronological development of Remote Sensing.

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FACULTY OF SCIENCE  
M.Sc. (CHEM/OC/PCH-2YPPG) I – SEMESTER REGULAR EXAMINATIONS, DEC- 2017

**PHYSICAL CHEMISTRY**

PAPER – 03

(Common paper)

Time: 3 hours]

[Max. Marks: 70

**Section – A**

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

1. Show that  $(\frac{\partial V}{\partial T})_P = -(\frac{\partial S}{\partial P})_T$
2. Derive Nernst equation?
3. Write a short note on
  - a) Hermitian Operator                      b) Hamiltonian Operator.
4. Derive Eyring equation?
5. Write the Thermodynamic criteria for spontaneity of a chemical reaction.

**Section – B**

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

6. a) i) Derive the equation for entropy changes in mixing of Ideal gases?  
 ii) 5 moles of an Ideal gas is expands form 5 lit to 50 lit at 300K. Calculate the free energy change for above process? (R =2Cal/mole)  
 (OR)  
 b) i) Derive Van't Hoff equation?  
 ii) Define Third law of Thermodynamics? And write it one application?
7. a) Define LJP? Derive the expression for LJP? How can its eliminated?  
 (OR)  
 b) Derive Debye-Huckel-Onsager equation? Write its limitations?
8. a) i) What are Well behaved functions?  
 ii) Find out the Eigen value of  

$$\Delta = \frac{-h^2}{8\pi^2m} \frac{\partial^2}{\partial x^2} \quad \psi = \sin\left(\frac{n\pi}{a}\right)x.$$
 (OR)  
 b) i) Show that Hermitain Operator Eigen Value are real?  
 ii) Write a note on Pastulates of Quantum mechanics.
- 9.a) i) What are Chain reactions? Derive the rate law of H<sub>2</sub>-Br<sub>2</sub> chain reaction?  
 (OR)  
 b) i) Swain-Scott equation?  
 ii) Hommond's Pastulate?
- 10.a) i) Explain Lindeman's Theory?  
 ii) Write a note on Wave Particle duality and Heisenberg uncertainty principle.  
 (OR)  
 b) i) Explain about potentiometric titrations.  
 ii) Derive Gibb's Helmholtz equation?

FACULTY OF SCIENCE  
M.Sc. (PHYSICS/PE) I – SEMESTER REGULAR EXAMINATIONS, DEC-2017  
**ELECTROMAGNETIC THEORY**  
PAPER – III

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. Define electrostatic potential.
2. Distinguish between propagation and attenuation constants.
3. What is dispersion of electromagnetic waves?
4. State inhomogeneous wave equation and explain the terms.
5. What is long wave length approximation of radiation?

Section – B

(5x10=50)

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

6. a) Describe the procedure for the solution of Laplace equation in cylindrical co-ordinates.  
(OR)  
b) State and prove the poynting theorem? Explain its significance.
7. a) Set-up and solve Maxwell's equations for homogeneous dielectric medium.  
(OR)  
b) What is polarization? Explain the polarization of electromagnetic waves.
8. a) Explain the reflection and refraction. Explain the total internal reflection.  
(OR)  
b) Explain the reflection of electromagnetic waves at the interface dielectric and conducting media.
9. a) Obtain the wave equation using scalar and vector potentials. Outline the method of solving it.  
(OR)  
b) Explain the radiation emitted by an accelerating charge.
10. a) Derive the Maxwell's equations and obtain wave equation from these equations.  
(OR)  
b) What is multipole expansion? Comment on the significance of different terms of multipole expansion.

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## FACULTY OF SCIENCE

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

**TOPOLOGY****PAPER – III**

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:

- Suppose A and B are arbitrary subsets of a topological space, prove the following:  
 i)  $\overline{\emptyset} = \emptyset$     ii)  $\overline{\bar{A}} \subseteq \bar{A}$     iii)  $\overline{\bar{\bar{A}}} = \bar{A}$     iv)  $\overline{A \cup B} = \bar{A} \cup \bar{B}$
- State and prove Lindelof's theorem.
- Define  $T_1$  and  $T_2$  spaces. Give an example of a space which is  $T_1$  but not  $T_2$  with justification.
- Show that any continuous image of a connected space is connected.
- Show that every compact metric space has the Balzano-Weistrass property.

Section – B

(5x10=50)

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

- a) State and prove Kuratowski closure axioms.  
(OR)  
 b) i) Prove that every separable metric space is second countable.  
 ii) Let X be a topological space and A an arbitrary sub-set of X. Then show that  $\bar{A} = \{X/\text{each neighborhood of X intersects A}\}$ .
- a) State and prove Ascoli's theorem.  
(OR)  
 b) i) Prove that any continuous function from a compact metric X space into a metric space Y is uniformly continuous.  
 ii) Prove that every sequentially compact metric space is totally bounded.
- a) State and prove Lebesgue Covering Lemma.  
(OR)  
 b) i) Prove that every sequentially compact metric space is compact.  
 ii) Prove that if X is compact metric space then X is separable.
- a) State and prove Urysohn's Lemma.  
(OR)  
 b) i) Let X be a topological space and A be connected sub space of X. If B is a sub-space of X such that  $A \subseteq B \subseteq \bar{A}$  then prove that B is connected.  
 ii) Prove that a topological space is disconnected if and only if there exists a continuous mapping of X onto the discrete two-point space  $\{0,1\}$ .
- a) Define a connected space. Prove that a sub-space of the real line R is connected if and only if it is an interval.  
(OR)  
 b) State and prove Tietze Extension theorem.



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

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. NK Cells
2. ELISA
3. Grave's disease
4. Xenograft
5. Adaptive Immunity

Section – B

(5x10=50)

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

6. a) Write an essay on the role of macrophages in immunity.  
(OR)  
b) Give an account of primary lymphoid organs.
7. a) Describe the key differences and similarities between IgG and IgM molecules.  
(OR)  
b) Explain the classical pathway of complement system.
8. a) What do you understand by the term 'Hypersensitivity'? Explain the Type-I Anaphylactic hypersensitivity.  
(OR)  
b) Write an essay on systemic autoimmune diseases.
9. a) Discuss the nature of interaction and immune pathological considerations of bacterial infections.  
(OR)  
b) Describe the tumor specific antigens.
10. a) Describe the structure and functions of Major Histo Compatibility Complex (MHC).  
(OR)  
b) Write an essay on Pathogenesis and treatment of autoimmune diseases.

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FACULTY OF SCIENCES  
MCA I – SEMESTER REGULAR EXAMINATIONS, DEC- 2017  
COMPUTER PROGRAMMING AND PROBLEM SOLVING  
**PAPER – III**

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. Discuss about various computing environments.
2. Discuss about memory allocation functions.
3. Discuss about pre-processor directives?
4. Explain inline function with example?
5. Write about characteristics of object oriented programming?

**Section – B**

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

6. a) Compare else if ladders and switch statement with an example?  
(OR)  
b) Discuss about various operators in 'C' language.
7. a) Explain bubble sort with an example program.  
(OR)  
b) Define pointer and explain about passing pointers to functions with suitable example?
8. a) Discuss about enumerated data types.  
(OR)  
b) Discuss about various file Input / Output functions?
9. a) Discuss about function overloading with suitable example?  
(OR)  
b) Discuss in detail about different constructors in C++ with example?
10. a) What is template? Explain function templates and class templates with example?  
(OR)  
b) Define an exception? Explain about standard exceptions.

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FACULTY OF SOCIAL SCIENCES  
PG/B.L.I.S. I – SEMESTER REGULAR EXAMINATIONS, DEC- 2017  
**LIBRARY CATALOGUING**  
PAPER – III

Time: 3 Hours]

[Max. Marks: 80

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 word 'Catalogue' and what do you mean by Library Catalogue?
2. Areas of Main Entry as per AACR-2R.
3. Write about SLSH.
4. What is Pre-natal Cataloging?
5. MARC.

Section – B

(5x12=60)

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

6. a) Give a brief summary of Physical Forms of Library Catalogue.  
(OR)  
b) What are the Objectives and Functions of Library Catalogue?
7. a) Elaborate Normative Principles of Library Catalogue.  
(OR)  
b) Write about the kinds of entries according to AACR-2R.
8. a) What is Subject Indexing and give the Techniques of Subject indexing?  
(OR)  
b) Give an account of LCSH and Chain Procedure.
9. a) Comment on 'Centralized Cataloguing'.  
(OR)  
b) Summarize OCLC and LC.
10. a) What is Metadata and give the concept of Metadata and Catalogue?  
(OR)  
b) Write about Filing of Catalogue Entries.

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FACULTY OF SOCIAL SCIENCES  
M.A. (APE: 5-YIPGP) V – SEMESTER REGULAR EXAMINATIONS, DEC-2017  
ENVIRONMENTAL ECONOMICS -I  
**PAPER – III**

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. Growth Vs Development
2. Ecology
3. Market Failure
4. Marine Pollution
5. Renewable resources

Section – B

(5x10=50)

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

6. a) Define environmental economics and explain its scope and importance in the present day context.  
(OR)  
b) Explain in detail the organization and structure of the eco-systems.
7. a) Critically explain the linkage between environment and development.  
(OR)  
b) Define atmospheric pollution and its effect on the agriculture sector.
8. a) What do you mean by common property resources and explain their characteristics.  
(OR)  
b) Define public good and discuss the determination of optimum level of supply of public good.
9. a) Explain various methods of measurement of externalities.  
(OR)  
b) Critically examine the relationship between pollution level of externalities and economic efficiency.
10. a) What do you mean by conservation of resources and explain various methods of resource and explain various methods of resource conservation.  
(OR)  
b) Explain how the process of recycling and waste reduction helps to control the pollution level in the economy.

FACULTY OF SCIENCE  
M.Sc. (PCH-5YIPGP) V-SEMESTER REGULAR EXAMINATIONS, DEC-2017  
**PRINCIPLES OF DRUG DISCOVERY AND DEVELOPMENT**  
PAPER – III

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. Write a note on molecular databases.
2. Write a note on pharmacokinetic parameters and their clinical significance.
3. Define the terms “Search and destroy drugs” and “Self destruct drugs” with examples.
4. Explain about drug likeliness with examples.
5. Explain SAR of local anesthetics.

Section – B

(5x10=50)

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

- 6 a) Write briefly about drugs obtained from plant sources with examples.  
(OR)  
b) Describe merits and demerits of Curcumin as natural lead molecule?
- 7 a) Describe various pharmacokinetic models and explain the effect of plasma protein binding on pharmacokinetic parameters with examples?  
(OR)  
b) Explain the use of pharmacokinetics in drug design with examples.
- 8 a) Explain about genetic and stereo chemical factors effecting metabolism.  
(OR)  
b) Give a detailed note on various metabolic reactions with examples.
- 9 a) Describe the concept of prodrugs with examples and explain their advantages and disadvantages?  
(OR)  
b) Explain about property profiling in drug discovery with examples.
- 10 a) Describe the binding roles of hydroxyl, amino, aromatic rings and double bonds during target-ligand interactions with examples.  
(OR)  
b) Describe the development of oxaminoquine through SAR Studies?

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FACULTY OF SCIENCES  
MCA V – SEMESTER REGULAR EXAMINATIONS, DEC 2017  
OBJECT ORIENTED SYSTEM DEVELOPMENT

**PAPER – III**

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. Why UML model is needed.
2. What is signal and how to show it in UML?
3. What are the steps to model a design pattern?
4. Write example subsystems for simple ATM example.
5. Why requirement capture is difficult.

**Section – B**

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

6. a) What is Class Diagram? When to use class diagrams? Explain with examples.  
(OR)  
b) i) Differentiate between generalization and aggregation.  
ii) Write about different relationships.
7. a) What is activity diagram? Mention the Elements of activity diagram? Write an example activity diagram.  
(OR)  
b) i) What is State chart diagram? When to use it?  
ii) Define Event, State, transitions and show them with examples.
8. a) i) Differentiate between component and development diagram.  
ii) Write about patterns and frameworks.  
(OR)  
b) Write short note on  
i) Systems and models  
ii) Collaborations.
9. a) Explain the life cycle of unified process development.  
(OR)  
b) Write about architecture-centric process.
10. a) Write about Capturing use cases and creation of analysis model form use-cases.  
(OR)  
b) Write short note on following:  
  
i) Role of Design in Software life cycle.                      ii) Testing.

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FACULTY OF BUSINESS MANAGEMENT  
IMBA V – SEMESTER REGULAR EXAMINATIONS, DEC- 2017  
**PROJECT MANAGEMENT**  
PAPER – III

Code No. 1353

Time: 3 Hours]

[Max. Marks: 70  
(5x3=15)

**Section – A**

Answer any five of the following questions in not more than **ONE** page each

1. a) Project Life Cycle  
b) Demand Estimation Techniques  
c) Cost Trade off  
d) Project Audit  
e) Social appraisal  
f) Role of Project Manager  
g) Project financing  
h) Mutual Exclusive Project

**Section – B**

(5x8=40)

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

2. a) What is a Project? And explain the characteristics of a Project.  
(OR)  
b) Describe the need and importance of Project management.
3. a) What are the steps involved in identifying the Project? Explain.  
(OR)  
b) Explain the process of Project formulation.
4. a) Explain the process of Project Appraisal.  
(OR)  
b) Write a detailed note on Technical and Economic Appraisal of the industrial Project.
5. a) Write down the guidelines for construction of Project Network.  
(OR)  
b) Consider the detail of a Project which has 10 activities.  
i) Draw a network of the project.  
ii) Find the Critical Path and Project duration of the critical path.

Activity	A	B	C	D	E	F	G	H	I	J
Pre-decessor	-	-	-	-	B	E	C	A, F	E	D, G
Duration (Months)	6	10	11	9	5	8	2	8	7	4

6. a) Explain the steps needed to be followed while closing the project or terminating the project.  
(OR)  
b) Explain the steps involved in Project Control Process.

**Section – C (Compulsory)**

(1x15=15)

Project Comprising of eight tasks (A to H) has the following characteristics.

Task Predecessor		Time duration (Weeks)		
		Optimistic	Most	Pessimistic
		Likely		
A	None	2	4	12
B	None	10	12	26
C	A	8	9	10
D	A	10	15	20
E	A	7	7.5	11
F	B, C	9	9	9
G	D	3	3.5	7
H	E, F, G	5	5	5

- i) Calculate the time duration of each activity and the variance.
- ii) Draw the network diagram, determine the critical path and mark in the network.  
What is the total Project duration?
- iii) What is the probability of achieving the Project within the deadline of 30 weeks?

FACULTY OF SOCIAL SCIENCES  
M.A. (APE: 5-YIPGP) VII – SEMESTER REGULAR EXAMINATIONS, DEC-2017  
QUANTITATIVE METHODS -I  
**PAPER – III**

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. Concept of function.
2. Cobb-Douglas production function.
3. Gini-coefficient.
4. Simple regression.
5. Weighted indices and unweighted indices.

Section – B

(5x10=50)

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

6. a) Explain the uses and limitations of mathematics in economic analysis.  
(OR)  
b) The demand for a commodity is  $D=44-7p$ , the supply function  $s = 2p-10$ , find:  
i) equilibrium price      ii) The quantity exchange in the market at this price.

7. a) Explain the problems of maxima and minima with one example  
i.e. Let  $f(x) = x^3 - 6x^2 + 9x - 5$ , determine the value of maxima.  
(OR)

- b) Explain the problems of maxima and minima in single functions.

8. a) Discuss the various method of collecting primary data.  
(OR)

- b) Compute the mode of the following series:

Size of items:	0-5	5-10	10-15	15-20	20-25	25-30
Frequency:	20	24	32	28	20	16

9. a) Critically examine the concept of correlation and its methods.  
(OR)

- b) Calculate Spearman's rank correlation for the following data:

Ranks in Maths:	1	2	3	4	5	6	7	8	9	10
Ranks in Statistics:	4	8	2	3	5	7	6	9	10	1

10. a) What are index numbers? What are their uses?  
(OR)

- b) Using Fisher's ideal formula, compute price and quantity index numbers for 1984 with 1982 as base year, given the following:

Year	Commodity (A)		Commodity (B)		Commodity (C)	
	Price (Rs.)	Quantity (kg)	Price (Rs.)	Quantity (kg)	Price (Rs.)	Quantity (kg)
1982	5	10	8	6	6	3
1984	4	12	7	7	5	4

## FACULTY OF SCIENCE

M.Sc. (PCH-5YIPGP) VII - SEMESTER REGULAR EXAMINATIONS, DEC-2017

**PHARMACOKINETICS AND DRUG DELIVERY SYSTEMS****PAPER – III**

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 apparent volume of distribution.
2. Write a note on therapeutic drug monitoring?
3. Write a short note on biodegradable polymers.
4. Write a short note on monoclonal antibodies.
5. Write a short note on resealed erythrocytes as targeted drug delivery system.

Section – B

(5x10=50)

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

- 6 a) What are the different factors influencing drug absorption? Explain in detail about pH-Partition hypothesis.

(OR)

- b) Describe the designing of bioavailability studies in detail.

- 7 a) What are different causes of non-linearity and explain in detail about Michaelis-Menton kinetics.

(OR)

- b) Write in detail about pharmacokinetics of geriatrics and pediatrics.

- 8 a) Describe the concept of controlled oral drug delivery systems and its merits & demerits?

(OR)

- b) Classify the polymers used in controlled release drug delivery system with examples and write a note on polymer degradation and erosion.

- 9 a) Explain briefly about liposomes and their applications.

(OR)

- b) What are the different components of transdermal drug delivery system and explain in detail about its formulation.

- 10 a) Explain the principle and techniques of formulation and evaluation of nanoparticles and explain their applications.

(OR)

- b) What is recombinant DNA technology? Write its advantages; describe the main steps involved in gene cloning.

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FACULTY OF BUSINESS MANAGEMENT  
IMBA VII – SEMESTER REGULAR EXAMINATIONS, DEC- 2017  
**ACCOUNTING FOR MANAGERS**  
PAPER – III

Time: 3 Hours]

[Max. Marks: 70  
(5x3=15)**Section – A**Answer the following questions in not more than **ONE** page each:

1. Dual aspect Concept.
2. Prepaid Expenses.
3. Current Assets.
4. Uses of funds.
5. Economic Accounting.

**Section – B**

(5x8=40)

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

6. a) Describe accounting as an information system.

(OR)

- b) From the following transactions prepare subsidiary books and post them into Ledger:

Date	Particulars	Amount Rs.
2016 Jan. 1	Purchased goods from Anil enterprises	2,800
Jan. 03	Bought goods on credit from Jaya Traders from	12,000
Jan. 05	Sold goods to Sunil & Co. for	6,000
Jan. 07	Y supplies us goods for cash	4,800
Jan. 08	X sold goods for cash	1,500
Jan. 10	Goods returned to Anil Enterprises	500
Jan. 17	Goods returned by Rao & Co.	240
Jan. 22	Dispatched goods to Sun & Co.	4,000
Jan. 27	Sold goods to Ganapathi Stores Ltd.	500
Jan. 28	Bought goods from Krish & Co.	1,000

7. a) Explain the rationale of making adjustments at the time of preparing final accounts.

(OR)

- b) The following are the balances extracted from the books of Mr. Mohith as on 31.03.2017.

Particulars	Rs.	Particulars	Rs.
Capital	30,000	Buildings	22,500
Machinery	15,000	Furniture	1,500
Motor car	12,000	Opening stock	24,000
Purchases	1,11,000	Purchase returns	1,500
Sales	2,10,000	Sales returns	750
Sundry debtors	22,500	Sundry creditors	7,200
Cash on hand	450	Cash at bank	7,050
Salaries	21,000	Rent	6,000
Commission	2,100	Taxes	900
Bad debts	300	Insurance Premium	600
Discount earned	750	Discount allowed	1,050
General expenses	1,200	Provision for doubtful debts	450

- a) Outstanding: Salaries Rs.200 Commission Rs.300; Rent Rs.1,200
  - b) Insurance premium prepaid Rs.150.
  - c) Maintain provision for Doubtful debts at 5%.
  - d) Depreciate machinery by 5% p.a., Motor car by 10% p.a., Furniture by 4% and Buildings by 3% p.a.,
  - e) Closing stock as on 31.03.2017 Rs.30,000.
- You are required to prepare Trading and Profit and Loss Account for the year ending 31.03.2017 and Balance Sheet as on date.

[PTO]

8. a) "Ratio analysis is a tool of management for measuring achievements in efficiency and guiding business policies". Discuss.

(OR)

- b) Given: Current Ratio = 2.8  
Acid-test Ratio = 1.5  
Working Capital = Rs.1,62,000

- Find out: i) Current Assets  
ii) Current Liabilities and  
iii) Liquid Assets.

9. a) Distinguish between funds flow and cash flow statement. Explain how the funds from operations are ascertained.

(OR)

- b) Calculate Cash Flow from operating activities by indirect method from the following:

- i) Profit made during the year Rs.2,50,000 after considering the following:

- |                                |        |
|--------------------------------|--------|
| a) Depreciation                | 10,000 |
| b) Amortisation                | 5,000  |
| c) Transfer to General Reserve | 7,000  |
| d) Profit on Sale of land      | 3,000  |

Following is the position of current assets and current liabilities:

	Opening Balance Rs.	Closing Balance Rs.
Debtors	12,000	15,000
Creditors	15,000	10,000
Bills Receivable	10,000	8,000
Prepaid Expenses	6,000	4,000

10. a) Outline the basic principles of Responsibility Accounting.

(OR)

- b) Briefly comment on the status of Green Accounting in India.

**Section – C (Compulsory)**

(1x15=15)

From the following Balance Sheet of Sri Ram Company you are required to prepare

- i) A statement of changes in the working capital and  
ii) A statement of sources and application of funds.

**BALANCE SHEET**

Liabilities	Dec.2015 Rs.	Dec.2016 Rs.	Assets	Dec. 2015 Rs.	Dec. 2016 Rs.
Current Liabilities	30,000	32,000	Cash	40,000	44,400
Bonds Payable	20,000	20,200	Accounts Receivable	10,000	20,700
Capital Stock	35,000	43,500	Inventories	15,000	15,000
Retained Earnings	15,000	19,500	Land	4,000	4,000
			Building	20,000	16,000
			Equipment	15,000	17,000
			Accumulated Depreciation	(5,000)	(2,800)
			Patents	1,000	900
	<b>1,00,000</b>	<b>1,15,200</b>		<b>1,00,000</b>	<b>1,15,200</b>

Additional Information:

- i) Income for the period Rs.10,000  
ii) A building that cost Rs.4,000 and which had a book value of Rs.1,000 was sold for Rs.1,400.  
iii) The depreciation charge for the period was Rs.800.  
iv) There was Rs.5,000 issue of common stock.  
v) Cash dividends Rs.2,000 and Rs.3,500 stock dividend were declared.

FACULTY OF SOCIAL SCIENCES  
M.A. (APE: 5-YIPGP) IX – SEMESTER REGULAR EXAMINATIONS, DEC-2017  
INDIAN ECONOMIC POLICY  
**PAPER – III**

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. GNP
2. GEM
3. Resource mobilization.
4. Capital market.
5. MNCs

Section – B

(5x10=50)

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

6. a) Explain the recent trends in National income in India.  
(OR)  
b) Explain the process of commercialization of agriculture and de-industrialization during British rule.
7. a) Briefly explain the impact of poverty alleviations steps carried out in India.  
(OR)  
b) Explain the recent changes in measurement of economic welfare and its trends in India.
8. a) Briefly discuss the process of Regional planning in India.  
(OR)  
b) What is the role of public sector in economic development during post independence?
9. a) Explain the role of monetary policy in control of inflation in India.  
(OR)  
b) Explain the working of money and capital market in India.
10. a) Critically discuss the impact of export import policy since 1991 on India's trade.  
(OR)  
b) What is the impact of Globalization on Indian economy?

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FACULTY OF SCIENCE  
M.Sc. (PCH-5YIPGP) IX-SEMESTER REGULAR EXAMINATIONS, DEC-2017  
**GREEN CHEMISTRY, CATALYSIS AND POLYMERS**  
PAPER – III

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. Write a note on atom economy in green synthesis.
2. Explain Transfer Hydrogenation.
3. Discuss stereoselective catalysis in (S)-naproxen synthesis.
4. Write the types of polymerization.
5. Write a note on solvent free reactions.

Section – B

(5x10=50)

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

- 6 a) Discuss the 12-Principle of Green Chemistry with suitable examples.  
(OR)  
b) Write a note on the use of green reagents and phase transfer catalysts in green synthesis.
- 7 a) Explain the catalytic hydrogenation of olefin and olefin metathesis.  
(OR)  
b) Explain the Ziegler Natta Polymerization and Oligomerization.
- 8 a) i) Explain carbonylation of aromatic compounds with an example.  
ii) Explain epoxidation reaction with synthetic applications.  
(OR)  
b) i) Discuss the bio-catalysis/enzymatic catalysis with examples.  
ii) Explain about catalytic hydrocarbon and alcohol oxidations with example.
- 9 a) Explain kinetics and mechanism of free radical polymerization.  
(OR)  
b) Write a note on suspension and emulsion polymerization.
- 10 a) i) Explain the crystal structure of polymers.  
ii) Write a note on glass transition temperature.  
(OR)  
b) i) Write a note on Fisher Tropsch synthesis and Water-gas shift reaction,  
ii) Write a note on the use of metal cation and covalent molecules as templates in reactions.

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FACULTY OF BUSINESS MANAGEMENT  
IM.B.A. (5YIPGP) III – SEMESTER REGULAR EXAMINATION, DEC- 2017  
**PERSONALITY DEVELOPMENT AND COMMUNICATION SKILLS**  
PAPER – VII

Time: 2 Hours]

[Max. Marks: 40

**Section – A**

Answer any **two** of the following questions in not more than **ONE** page each. (2x5=10)

1. Communication Process
2. Tenses
3. Body Language
4. Team Work

**Section – B**

Answer the following question in not more than **FOUR** pages each. (2x15=30)

5. a) What is meant by Interpersonal skills? Explain the significance of Interpersonal skills in business management.  
(OR)  
b) Write briefly about speaking skills and methods to improve the skills.
6. a) What is goal setting? Explain the process of goal setting in detail.  
(OR)  
b) What is time Management? Explain the significance and problems in Time Management.

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