

**DHAKA COACHING CENTRE**

Karimabad Campus: 36826389, 36826381 Gulshan Campus: 34987386, 34812375

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**MID TERM EXAMINATION 2016**

Paper: Zoology

Class: XI-A-B-C

Max. Marks. 08

Time: 15 Minutes

**SECTION "A" (MULTIPLE CHOICE QUESTIONS)**

**Q1: Choose the correct answer for each from the given options:**

1. The term enzymes was coined by  
\* F. Wilhelm                      \* F. Miescher                      \* Bloor                      \* Murdler
2. The Lock-Key model for enzymes was proposed by  
\* Altman                      \* Cech                      \* Bloor                      \* Fischer
3. "Plasmodium is the cause of malaria" this statement is a/an.  
\* Hypothesis                      \* Observation                      \* Conclusion                      \* Theory
4. All non-chlorophyllus, multicellular, eukaryotic organisms with no cell wall are placed in  
\* Kingdom Plantae                      \* Kingdom Animalia                      \* Kingdom Fungi                      \* Kingdom Protocista
5. Conjugate enzymes are called  
\* Apoenzyme                      \* Riboenzyme                      \* Holoenzyme                      \* Co-enzyme
6. The non-protein part of holoenzyme is  
\* Apoenzyme                      \* Co-enzyme                      \* FAD                      \* Prosthetic group
7. Nematocysts are present in  
\* Ectoderm                      \* Mouth                      \* Endoderm                      \* Tentacles
8. Physalia is a colony of different  
\* Zooids                      \* Animals                      \* Plants                      \* Insects
9. Portuguese man of war is another name of  
\* Physalia                      \* Euplectella                      \* Obelia                      \* Demospongia
10. True nervous system cells start to find for first time in  
\* Cnidarians                      \* Arthropods                      \* Annelids                      \* Nematods
11. Organ formation starts first time in  
\* Cnidarians                      \* Arthropods                      \* Nematodes                      \* Platyhelminthese
12. Flame cells are called  
\* Protonephridia                      \* Meta nephridia                      \* Nephridia                      \* Nephrostome
13. Muscular system of Nematode consists of  
\* Longitudinal & circular muscles                      \* Longitudinal muscles only  
\* Circular muscles only                      \* Skeletal muscles striated
14. First animal having complete digestive system is  
\* Annelids                      \* Nematodes                      \* Molluscs                      \* Platyhelminthes
15. The excretory cells of planaria are known as  
\* Falme cell                      \* Nephrons                      \* Alveoli cell                      \* Neurons
16. The excretory organ of earthworm is known as  
\* Metanephridia                      \* Nephron                      \* Protonephridia                      \* Nephridia

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**MID TERM EXAMINATION 2016**

Paper: Zoology

Class: XI-A-B-C

Max. Marks. 32

Time: 1 Hour 45 Minutes

**SECTION "B" (SHORT ANSWER QUESTIONS)**

**Note: Answer Ten part in all. Select five from Reasoning Question and five from Non-Reasoning Question. (20)**

**Q2a) Reasoning Question.**

- i. Why sporozoa have not any locomotory structure?
- ii. Why mononucleotide is not be the part of DNA or RNA?
- iii. Enzyme have specific active site ? Why.
- iv. In human alimentary cannal which enzymes are digest the ice cream?
- v. How you explain, platyhelminthes are triploblastic but a-coelomate?
- vi. Why in parasite nervous system is absent?
- vii. How you explain that quantitative observation gives better information then qualitative observation.
- viii. Gives adaptive feature in cannal system of Sponge.

**Q2b) Non Reasoning Question.**

- ix. Write any four distinguish feature of echinodernate
- x. Difference between  
\* Radial symmetry and bilateral symmetry \* Saturated and unsaturated Acylglycerol
- xi. Described the phenomena of alternation of generation with example.
- xii. Write the name & function of cells present in sponge body wall.
- xiii. Write about the carbohydrate & name its group types.
- xiv. Explain the parasitic adaption in platyhelminthes.
- xv. Write about the economic importance of insects OR Mollusca.

**SECTION "C" (DETAILED – ANSWER QUESTIONS)**

**Note: Answer any two question in all. All question carry equal marks: (12)**

- Q3. Give salient feature of Cnidaria OR Annilida? Described its classes with example. **OR**  
Described the fundamental characteristic of class whose animal have hairs & fur? Write about its sub types with example.
- Q2. Described in detailed the biologically important properties of water.
- Q3. What is energy of activation? Described in detailed the factors affecting on enzyme activities.

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**MID TERM EXAMINATION 2015**

Paper: Accounting  
Class: XI-A (Commerce)

Max. Marks: 15  
Time: 20 Minutes

**(MULTIPLE CHOICE QUESTION)**

**Q#1: Choose the correct answer for each from the given options:**

- 1) It is called current liability:**  
\* Furniture \* overdraft \* rent income \* salaries
- 2) This account is credited for recording advance collection for rent:**  
\* unearned rent account \* rent expense account \* rent payable account \* prepaid rent account
- 3) It is not recorded in the general journal**  
\* Purchase of equipment for cash \* purchase of equipment on credit  
\* Purchase of goods for cash \* balances of accounts
- 4) Contra entries are recorded in:**  
\* One side of the cash book \* three columns of cash book  
\* Both sides of the cash book \* none of these
- 5) It is not recorded in the cash book:**  
\* sold furniture for cash \* sold building on account  
\* purchase supplies for cash \* purchase goods for cash
- 6) These accounts normally don't have a debit balance:**  
\* Cash \* Purchases \* Insurance expense \* Purchase discount
- 7) Which of the following accounting equation is correct**  
\*  $asset = capital - liability$  \*  $capital - liability = assets$   
\*  $assets = liability + capital$  \* all of these
- 8) Which of the following account is debit balance**  
\* Assets \* Expenses \* A & B \* Owner equity
- 9) Withdraw Cash for personal use means**  
\* Drawing \* Capital \* Cash \* Bank



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**MID TERM EXAMINATION 2015**

Paper: Accounting  
Class: XI-A (Commerce)

Max. Marks: 85  
Time: 2 Hours 40 Minutes

**Q2: Cash Book:**

Following are the selected transactions of Zahid Traders.

Feb. 01,2011: Opening balances: cash in hand Rs.20000 & cash at bank Rs.80000.

Feb. 01,2011: Established a petty cash fund by issuing a cheque of Rs.1000.

Feb. 05,2011: Received a cheque of Rs.5000 from Xameer after a deduction of discount of Rs.110.

Feb. 12,2011: Deposited Xameer's cheque into bank.

Feb. 20,2011: Purchased equipment for Rs.10000 ..

Feb. 28,2011: withdrew cash 10000 for office use.

**Required: Record the above transactions in three column cash book.**

**Q3: General Journal:**

Given: Take information from Question No.3 in this paper.

**Required: Give entries in general journal in skeleton form**

**Q4: PETTY CASH BOOK**

**Adeel & Company established Petty Cash Fund with imprest System by issuing a cheque of Rs. 2500.**

**The following payments were made during the month of January 2013 From Fund;**

January 02 Paid For taxi fare Rs. 250

January 03 Paid for Paper ink etc Rs. 150

January 05 Paid for entertainment Rs. 210

January 07 Paid for bus fare Rs. 30

January 10 Paid for VPP received Rs. 40

January 12 Paid for repair of monitor Rs. 120

January 14 Paid for Postage stamps Rs. 50

January 16 Paid for rickshaw fare Rs. 60

January 18 Paid for gum, paper etc. Rs. 200

January 22 Paid for transporting Rs. 230

January 24 Paid advance to watchman Rs. 300

January 26 Paid for telegram Rs. 30

January 28 Paid for rubber stamp Rs. 250

January 30 Paid for tea and coffee Rs. 80

**Required:**

- **Record the above transactions in the Petty Cash Book having special columns for:**
  - Office Supplies
  - Postage & Telegram
  - Entertainment

- Conveyance
- Miscellaneous
- **Balance the poetry cash Book on 31<sup>st</sup> January 2012 and enter the amount reimbursed on February 01, 2012**

**Q5: GENERAL JOURNAL:**

Journalise the following transactions in the books of ANUMTA & Co. 1998.

- June 1 Started business with a capital of 60,000
- June 2 Cash deposits bank 30,000
- June 4 Purchased goods from Kamal on credit 10,000
- June 6 Paid to Kamal 4,920
- June 6 Discount allowed by him 80
- June 8 Cash Sales 20,000
- June 12 Sold to Hameed 5,000
- June 15 Purchased goods from SABA on credit 7,500
- June 18 Paid Salaries 4,000
- June 20 Received from Hameed 2,480
- June 20 Allowed him discount 20
- June 25 Withdrew from bank for office use 5,000
- June 28 Withdraw for personal use 1,000
- June 30 Paid Hanif by cheque 3,000

**Q6: CASH BOOK:**

From the following transaction you are require to prepare Three Column Cash book 2000 Rs.

- Jan. 1 Cash balance 4000
- Bank balance 25000
- Jan. 2 Cash sales 31000
- Jan. 8 Cash purchases 22000
- Jan. 15 Purchases of machinery by issue of cheque 10000
- Jan. 20 Paid into bank 15000
- Jan. 25 Rent paid by the cheque 1500
- Jan. 30 Salary paid 2500

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### MID TERM EXAMINATION 2016

Paper: Botany  
Class: XI- A/B

Time: 2 Hours  
Max. Marks: 45

### Section A

#### (Multiple Choice Questions) (MCQ's)

09 Marks

**Q1: Attempt Eighteen questions from this section.**

- i. Nucleus was discovered by:  
a) Robert Hook                      b) Schleiden                      c) Schwann                      d) Robert Brown
- ii. Cancer causing toxin is called  
a) Mycotoxin                      b) Aflatoxin                      c) Phytotoxin                      d) Mold toxin
- iii. The most common method of bacterial reproduction is  
a) Fission                      b) Endospory                      c) Conjugation                      d) Transduction
- iv. Rod shaped bacterium is called  
a) Bacillus                      b) Coccus                      c) Vibrio                      d) Spirillum
- v. A mutualistic association between fungi & roots of plants is called:  
a) Lichens                      b) Mycorrhizae                      c) Ectomycorrhiza                      d) Symbiosis
- vi. This is the main constituent of cell-wall & its is used to manufacture paper:  
a) Pectin                      b) Lignin                      c) Hemicellulose                      d) cellulose
- vii. Fungal cell wall is  
a) Protein                      b) Lipid                      c) Cellulose                      d) Chitin
- viii. Energy is released from  
a) Chloroplast                      b) Mictochondria                      c) ER                      d) Golgibodies
- ix. Fungi which lack sexual reproduction is called  
a) Deutromycota                      b) Basidiomycota                      c) Ascomycota                      d) Zygomycota
- x. Fungus utilized in baking industry  
a) Yeast                      b) Mushroom                      c) Bread mold                      d) Penicillium
- xi. Plasma membrane is composed of  
a) Lipid                      b) Protein                      c) Glycoprotein                      d) All of them
- xii. Energy is required for  
a) Active transport                      b) Diffusion                      c) Osmosis                      d) All of them
- xiii. Chromosomes with equal arms called  
a) Metacentric                      b) Sub-metacentric                      c) Acro centric                      d) Telocentric
- xiv. The viruses are  
a) Cellular                      b) Non-cellular                      c) A cellular                      d) Multicellular
- xv. The cause of hepatitis is  
a) Virus                      b) Bacteria                      c) Fungi                      d) Protozoans
- xvi. Yeast belongs to:  
a) Zygomycota                      b) Ascomycota                      c) Basidiomycota                      d) Deutromycota
- xvii. Plant like protoctists are  
a) Algae                      b) Slime mold                      c) Water mold                      d) Protozoa
- xviii. Bread mold belongs to  
a) Ascomycota                      b) Zygomycota                      c) Basidiomycota                      d) Deutromycota

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**MID TERM EXAMINATION 2016**

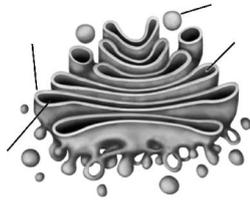
**Paper: Botany**

**Class: XI-A/B**

**Section B (Short-Answer Question) 22 Marks**

**Q2i) Attempt any ten part question. Each question carries one mark: (10)**

- i. Name the layers of cell-wall and their functions.
- ii. Define aplanospore or imbibition.
- iii. Differentiate between diffusion & facilitated diffusion.
- iv. Name the different types of ascocarps and also mention their differences.
- v. Write down two differences between temperate & virulent viruses
- vi. Why the viruses are appeared to be on borderline between living & non-living world?
- vii. Why ribosomes are regarded as protein factory of the cell?
- viii. Why do transpiration also called a necessary evil?
- ix. Give the name of the organelle in the given diagram & label the mark question.



- x. Define any two of the following:  
a) Osmotic potential   b) Osmotic pressure   c) Plasmolysis   d) Parasexuality
- xi. Name the viral diseases with their causative agents.
- xii. What are photosynthetic bacteria
- xiii. Write down two major differences between viroid & prion.
- xiv. Write down economical importance of bacteria or fungi.
- xv. Explain isomorphic alternation of generation in ulva.
- xvi. Write classification of fungi also write the names on which they are classified.

**Q2ii) Attempt any six part question. Each question carries two marks: (12)**

- i. Write postulates of cell theory.
- ii. Explain binomial nomenclature.
- iii. Write a note on Mitochondria OR Nucleus OR Chloroplast.
- iv. Write down the control measures of bacteria.
- v. Differentiate between vessels & tracheids.
- vi. Explain the technique to isolate cell components.
- vii. Write a note on Mycelium OR Yeast.
- viii. What is the cause of Hepatitis. Write transmission & control of Hepatitis.
- ix. Show a diagrammatic life cycle of Ulva. OR Write three cellular pathways for transportation of water upto xylem.

**Section C (Detailed-Answer Questions)**

**Note: Attempt any two questions from this section. All question carry equal marks. (14 Marks)**

- Q3. Draw and describe the life cycle of Bacteriophage.
- Q4. What are fungi? Explain Ascomycota OR Zygomycota in detail.
- Q5. Define transpiration and its types. Also describe the mechanism of stomatal transpiration. OR What is ascent of sap? Describe the mechanism of minerals and salts uptake by plants.

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**MID TERM EXAMINATION 2015**

**Class: XI-A(Com)**

**Paper: Business Math**

**Max. Marks: 50**

**Time: 2 Hours**

Note: Attempt any seven questions:

Q1. 9 men consume 120 Kg of rice in 20 days in how many will 15 men consume 250 kg of rice.

Q2. Perform the following binary operations.

a.  $11000 - 10101$                       b.  $110010 \div 101$

Q3. Solve the equations by using Cramer's Rule.

$$2x - 3y = 5$$

$$4x - 5y = 11$$

Q4. Distribute an amount of Rs. 8000 among A, B, and C in the Ratio 2:3:5. What is the share of A, B and C.

Q5. Find the value of determinant  $A = \begin{vmatrix} 2 & 3 & 4 \\ 1 & 1 & 3 \\ 3 & 4 & 2 \end{vmatrix}$

Q6. Find the vertex and roots of the parabola.

$$y = x^2 - 2x - 8$$

Q7. Convert the following.

a. 114 into Binary

b. 110101 into Decimal

Q8.  $A = \begin{bmatrix} 2 & -3 \\ 1 & 3 \end{bmatrix}$  and  $B = \begin{bmatrix} 4 & 3 \\ 5 & 2 \end{bmatrix}$

Find i.  $A^t \times B$                       ii.  $B^{-1}$

Q9. Find the Eq of line passing through (2, 3) and (5, 7) also find X and Y intercept.

Q10. Solve for  $x$ .

a.  $\frac{2x+10}{x+4} = \frac{4x-2}{2x-3}$

b.  $\frac{x-3}{3} + \frac{x}{2} - \frac{x-4}{4} = 0$

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**MID TERM EXAMINATION 2016**

**Class: XI-A**

**Paper: Chemistry**

**Time: 30 Minutes**

**Max. Marks: 85**

**Time: 3 Hours**

**Max. Marks: 17**

**Section 'A'**

**(Multiple Choice Question -MCQs)**

**Q1. Choose correct answer from following.**

**(17)**

- i. 0.1 mole of  $H_2$  contain.  
a.  $3.01 \times 10^{24} H$  atoms    b.  $1.204 \times 10^{23} H$  atoms    c. Both A & B    d. None of them
- ii. Which compound contain Empirical formula.  
a.  $M_2X_3$     b.  $m_5X_{15}$     c.  $MX_3$     d.  $M_2X_7$
- iii. Which colour has highest wave length  
a. Violet    b. Green    c. Red    d. Blue
- iv. The relation between x-rays and atomic number is.  
a. direct    b. inverse    c. equal    d. Approx equal
- v. Bond angle of  $SP^3$  hybridization with two lone pair of electron is.  
a.  $107^\circ$     b.  $104.5^\circ$     c.  $109.5^\circ$     d.  $120^\circ$
- vi. Which type of hybridization provides maximum separation between over lapping orbital's.  
a.  $SP^1$     b.  $SP^1$     c.  $SP^3$     d. both 2 and 3
- vii. 1 Kilo Joule is:  
a. 239 cal    b. 0.239 cal    c. 4.184 cal    d. 2.39 cal
- viii. No two electrons can have the same set of four quantum number said by.  
a. Hunds    b. Aufbau    c. Pauli    d.  $n+l$
- ix. This is the formula which is used to accommodated electron in sub energy levels.  
a.  $2n^2$     b.  $(2l+1)$     c.  $2(2l+1)$     d.  $2(2l+2)$
- x. Which process is used as a criteria of purity of solids.  
a. Melting point    b. Boiling point    c. Evaporation    d. Sublimation
- xi. Among them which is a intensive property.  
a. Mole number    b. Enthalpy    c. Entropy    d. refractive index
- xii. The S.I unit of surface tension is.  
a. Dyne/cm    b.  $erg/cm^2$     c.  $N/m^2$     d. N/m
- xiii. Which pair of solid have same crystalline structure.  
a.  $CaCO_3/NaNO_3$     b.  $Na_2SO_4/CaSO_4$     c.  $NaCl/MgCl_2$     d.  $uSO_4/Cu(NO_3)_2$
- xiv. Which of the following has four significant figure.  
a. 15.04    b. 7000    c. 0.004    d. 7860
- xv. Which molecule contain double covalent bond.  
a.  $C_2H_6$     b.  $C_2H_4$     c.  $O_2$     d. both b and c
- xvi. The value of Rydberg constant for hydrogen atom.  
a.  $109678 \text{ cm}^{-1}$     b.  $106978 \text{ cm}^{-1}C$     c.  $10798 \text{ cm}^{-1}$     d.  $190876 \text{ cm}^{-1}$
- xvii. Among which pair of gases having same rate of diffusion.  
a.  $CO_2 \& C_3H_8$     b.  $CH_4 \text{ and } CO_2$     c.  $SO_2 \& SF_6$     d.  $CH_4 \text{ and } He$

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**MID TERM EXAMINATION 2016**

**Class: XI-A**

**Paper: Chemistry**

**Max. Marks: 68**

**Time: 2½ Hours**

**SECTION 'B' (SHORT-ANSWER QUESTIONS) – (40 Marks)**

**Q2: Attempt any ten parts questions. All questions carry equal marks.**

- i) Define the following:  
a) Sublimation      b) Isomorphism      c) Polymorphism      d) Molar mass
- ii) Define ionic bond. Describe the mechanism of NaCl along with energy changes.
- iii) a) Write down the electronic configuration of the following  
\*  $_{35}\text{Br}$       \*  $_{24}\text{Cr}$       \*  $_{29}\text{Cu}^{2+}$       \*  $_{7}\text{N}^{3-}$   
b) State Pauli's exclusion Principle and explain with the help of Helium.
- iv) Derive general gas equation. Calculate the volume of 14g of Nitrogen gas at 20°C and 740 torr pressure.
- v) What is ideal gas? What are the causes of deviation of the real gas from ideal behaviour?
- vi) Formic acid,  $\text{HCHO}_2$ , burns in oxygen to form carbon dioxide and water as follows:  
$$\text{HCHO}_{2(\text{aq})} + \text{O}_{2(\text{g})} \longrightarrow 2\text{CO}_{2(\text{g})} + 2\text{H}_2\text{O} (\text{l})$$
  
If a 3.15-g sample of formic acid was burned in 2.0 L of oxygen, what volume of carbon dioxide would be produced? (Assume the reaction occurs at standard temperature and pressure, STP)
- vii) Write postulates of VSEPR Theory. Explain the shapes of any two molecules of the following on the basis of VSEPR theory.  
\*  $\text{NH}_3$       \*  $\text{BF}_3$       \*  $\text{CO}_2$       \*  $\text{H}_2\text{O}$
- viii) Give scientific reasons of the following:  
a) Powdered marble gives more effervescence with HCl than a piece of marble.  
b) A falling drop of liquid is spherical.  
c) Ionization potential of  $\text{N}_2$  is greater than  $\text{O}_2$ .  
d) Evaporation is a cooling process.
- ix) Calculate the following thermochemical equations:  
\*  $4\text{XY}_3 + 7\text{Z}_2 \longrightarrow 6\text{Y}_2\text{Z} + 4\text{XZ}_2$        $\Delta\text{H} = \text{_____ KJ}$   
\*  $\text{X}_2 + 3\text{Y}_2 \longrightarrow 2\text{XY}_3$        $\Delta\text{H}_1 = -320 \text{ KJ ?}$   
\*  $\text{X}_2 + 2\text{Z}_2 \longrightarrow 2\text{XZ}_2$        $\Delta\text{H}_2 = -110 \text{ KJ}$   
\*  $2\text{Y}_2 + \text{Z}_2 \longrightarrow 2\text{Y}_2\text{Z}$        $\Delta\text{H}_3 = -220 \text{ KJ}$
- x) An organic compound contains 12.80% carbon, 2.10% hydrogen and 85.10% bromine. 0.188 gm of the compound on evaporation displaced 22.4 ml of dry air at STP. Determine the molecular formula of the compound. (Atomic weights: C =12, H=1.008, Br=80)
- xi) Write short note on any TWO of the following.  
a) Surface tension    b) Viscosity      c) Quantum Numbers    d) Heisenberg uncertainty principle
- xii) A mixture of hydrogen (1.01g) and chlorine (17.73g) in a container at 30 K has a total gas pressure of 988 kPa. What is the partial pressure of hydrogen in the mixture.  
**OR**  
State and explain Dalton's law of partial pressures with its application.
- xiii) a) Calculate the wave number of spectral lines of hydrogen gas when the electron jumps from 4<sup>th</sup> orbit to 2<sup>nd</sup> orbit ( $R_H = 109678 \text{ cm}^{-1}$ )  
b) Calculate the radius of 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> orbit of Hydrogen atom
- xiv) Write any four postulates of Bohr's Atomic theory. Derive an expression for Radius or Energy of n<sup>th</sup> orbit.
- xv) Explain  $\text{sp}^3$  hybridization with example.

**SECTION 'C'(DETAILED-ANSWER QUESTIONS) (28 Marks)**

**Note: Attempt any two questions from this section. All questions carry equal marks.**

- Q3: a) State First Law of Thermodynamics. Show that  $\Delta H = \Delta E + P\Delta V$   
b) Starting from  $K.E = \frac{1}{2}mv^2$  and  $P.E = -Ze^2/r$ . Derive the formula for the wave number.  
c) What is Natural and Artificial radioactivity? Write the properties of  $\alpha$ -rays and  $\beta$ -rays.
- Q4: a) What is Co-ordinate covalent bond? Explain the bonding between  $H^+$  and  $NH_3$ .  
b) An amount of an ideal gas at 290.0 K has a volume of 17.05 L at a pressure of 1.40 atm. What is the pressure of this gas sample when the volume is halved and the absolute temperature is multiplied by four?  
c) Differentiate between any Two of the following:  
(a) Crystalline solid and Amorphous solid  
(b) Orbit and Orbital's  
(c) Valence bond theory and Molecular orbital theory.  
(d) Sigma and Pi bond
- Q5: a) Describe Rutherford's atomic model with its conclusion.  
b) Describe Hess's Law of constant heat summation with its application.  
c) When 4000 J of heat is added to a gaseous system at a constant pressure of  $101300 \text{ N/m}^2$ , its internal energy increases by 500 J. Calculate the change in the volume of the system.

Atomic masses of elements:

C = 12 a.m.u	H = 1 a.m.u	O = 16 a.m.u	S = 32 a.m.u	N = 14 a.m.u
He = 4 a.m.u	Cl = 35.5 a.m.u.	Mg = 24 a.m.u.	Ca = 40 a.m.u.	





\* Mercury has its meniscus upward

\* Ionization potential of N<sub>2</sub> is greater than that of O<sub>2</sub>

\* The reaction between ionic compounds are fast

\* The density of ice is less than in water

- vi. Write limitations of Rutherford's atomic model.
- vii. a) Why was the nucleus of hydrogen atom assumed to be a fundamental particle?  
b) How is emission of radiation from an atom explained by Bohr's model?
- viii. Describe Bohr's atomic model. How the defect of Rutherford atomic model are removed by Bohr's model?
- ix. Explain the origin of X-Rays and relationship between their wave length and nuclear charge in the atoms from which they originate.
- x. Balancing two equations in following by ion-electron method?  
\*  $\text{Cr}_2\text{O}_7^{2-} + \text{H}^+ + \text{I}_2 \longrightarrow \text{Cr}_3^+ + \text{IO}_3^- + \text{H}_2\text{O}$   
\*  $\text{Br}^- + \text{BrO}_3^- + \text{H}^+ \longrightarrow \text{Br}_2 + \text{H}_2\text{O}$   
\*  $\text{MnO}_4^- + \text{SO}_3^{2-} + \text{OH}^- \longrightarrow \text{Mn}^{2+} + \text{SO}_4^{2-} + \text{H}_2\text{O}$
- xi. Briefly explain the dipole moment and also show its units.
- xii. What is the solubility of lead chromate in moles per dm<sup>3</sup> at 25°C ksp for PbCrO<sub>4</sub> = 2.8 x 10<sup>-13</sup> mole/dm<sup>3</sup>.  
**(Pb = Atomic No 82 Atomic mass 207.2 Cr = Atomic No 24 Atomic mass 52)**
- xiii. a) State and explain the law of equilibrium. Name its application.  
b) What do you understand by Kc and Kp. Describe their relationships.
- xiv. Write down the postulates of the Arrhenius theory of ionization.
- xv. Calculate the heat of formation of N<sub>2</sub>O<sub>4</sub> from given data;  
a)  $2\text{NO}_2 \longrightarrow \text{N}_2\text{O}_4 \quad \Delta H = ?$   
b)  $\frac{1}{2}\text{N}_2 + \text{O}_2 \longrightarrow \text{NO}_2 \quad \Delta H = 33.95 \text{ KJ/mole}$   
c)  $\text{N}_2 + 2\text{O}_2 \longrightarrow \text{N}_2\text{O}_4 \quad \Delta H = 9.3 \text{ KJ/mole}$

## SECTION "C" (28 Marks)

**NOTE: Attempt any TWO questions from this section. Each question carries 14 marks.**

**Q.3.(a)** Explain the relationship between inter molecular attraction and the Kinetic energy of molecules in determining the physical state of a substance.

**(b)** What is meant by Radio activity? Describe the method of separation of  $\alpha$ ,  $\beta$  and  $\gamma$  rays. Describe briefly their properties.

**(c)** Define ionic bond? Explain by giving example of the formation of ionic bond between sodium and chlorine atoms.

**Q.4.(a)** Should AgCl precipitate from a solution prepared by mixing 400ml of 0.1M NaCl and 600ml of 0.03 M AgNO<sub>3</sub>.

**(Ag = Atomic No 47 Atomic mass 108 Cl Atomic No 17 Atomic mass 35.5 Na = Atomic No 11 Atomic mass 23)**

**(b)** What are reversible and irreversible reaction illustrate with example and graphical representation?

**(c)** Define electrolysis. Name the two parts of the Redox reaction that occurs in the electrolysis of molten sodium chloride and state where each part occurs?

**Q.5.(a)** Explain  $sp^3$  hybridization in carbon in detail.

**(b)** Explain the shape of ethene ( $C_2H_4$ ) on the basis of hybridization.

**(c)** Explain the causes of non-ideal behavior of gasses especially at high pressure and low temperature.

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**MID TERM EXAMINATION 2016**

Paper: Computer  
Class: XI

Max. Marks: 75  
Time: 3 Hours

**Note:** Attempt any **TWO** questions from section “C” and **Twelve** questions from section “B”,  
Section “A” is compulsory.

**Time: 30 Minutes**

**Max. Marks: 15**

**Section “A”(COMPULSORY)**

**Q.1 Chose the correct answer for each from the given options.**

- i. A 32 bit microprocessor has the word length equal to:  
\*2 bytes                      \*4 bytes                      \*6 bytes                      \*none of them
- ii. A compiler converts source program into \_\_\_\_\_ program.  
\*Machine                      \*Object                      \*Source                      \*none of them
- iii. 1 Terabyte is equal to:  
\*1024 MB                      \*1024KB                      \*1024 GB                      \*1024 bytes
- iv. This is not related to optical media:  
\*CD-R                      \*Magnetic Disk                      \*DVD                      \*CD-RW
- v. Bus is a set of:  
\*connectors                      \*ports                      \*wires                      \*RAM
- vi. The smallest memory is:  
\*bit                      \*nibble                      \*byte                      \*none of them
- vii. Printer’s resolution is usually measured in :  
\*data per inch                      \*dots per inch                      \*character per inch                      \*char per second
- viii. Pre-programmed memory is:  
\*RAM                      \*DIMM                      \*SRAM                      \*none of them
- ix. Which is called sequential storage medium?  
\*USB                      \*Magnetic Tape                      \*DVD                      \*Magnetic Disk
- x. A socket on a computer for transmitting data in parallel, which means more than one bit at a time  
\*Magnetic disk                      \*Socket                      \*Parallel port                      \*Serial port
- xi. Which is used for manufacturing chips?  
\* Semiconductors                      \*CU                      \*ALU                      \*none of them
- xii. A group of 4 bits is called:  
\*Nibble                      \*Byte                      \*Word                      \*none of them
- xiii. \_\_\_\_\_ is the characteristic of a monitor that affects the sharpness  
\*Net Pitch                      \*Dot Pitch                      \*Path Pitch                      \*none of them
- xiv. In \_\_\_\_\_ code each decimal digit is represented by a binary code of four bits.  
\*BCD                      \*ASCII                      \*EBCDIC                      \*none of them
- xv. \_\_\_\_\_ language is directly understood by computer without translation  
\*Machine                      \*High level                      \*Assembly                      \*All of them

**Section "B"(SHORT QUESTION ANSWERS) Marks 36**

**Q.2 Attempt TWELVE questions. All questions carry equal marks.**

- i. Define CPU and describe its all major parts with diagram
- ii. What do the term bit, byte and word stands for? Also define them
- iii. What is software? Explain its different types
- iv. Define Ports and describe its types
- v. Define ROM. What are its types?
- vi. Write short notes on any two of the following:  
\* Joystick                      \* Webcam                      \* Light pen
- vii. What are the full forms of following abbreviations?  
\*DPI    \*PROM    \*ASCII    \*LCD    \*LED    \*USB
- viii. What are codes? Describe its types
- ix. Differentiate between System software and Application software
- x. What is the function of the ALU in a micro computer system.
- xi. What is the function of Cache ?
- xii. For what purpose is Bar code Reader designed.
- xiii. What is computer system? Discuss the parts of computer system?
- xiv. What is an information Technology ? Discuss any characteristics of computer.
- xv. Why are high level languages easier to use?
- xvi. Distinguish between 'system software' and 'application software' ?
- xvii. What is a compiler ? Why is it required.
- xviii. What is a difference between source program and object program?

**Section "C"(DETAILED-QUESTION ANSWERS) Marks 24**

**Note: Answer any TWO questions from this section. All questions carry equal marks.**

- Q.3 (a) What are I/O devices? Describe any three output devices  
(b) What is secondary memory? Discuss its types  
(c) What is an operating system? Discuss the functions of an operating system.
- Q.4 (a) Describe RAM and its types  
(b) Define Scanner and its types  
(c) Define the following terms: i) CRT , Pixel , resolution and RGB
- Q.5 (a) Define Printer and its types  
(b) Define the term BUS. Discuss its all types  
(c) Explain how information is recorded in a magnetic type

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### MID TERM EXAMINATION 2015

Subject: Economics

Class: XI

Max Marks: 75

Time: 3 Hours

**Time: 20 Minutes**

**MCQs**

**Max Marks: 15**

**Q1. Choose the correct answer for each from the given option:**

- i. What was the topic of Smith's Book?  
\* Public Economics \* Wealth of Nations \* Value and Price \* Human desires
- ii. What was the title of famous book of Marshall?  
\* Value and Capital \* Economics of Labor \* the Principles of Eco \* History of Eco
- iii. Who was the writer of "Wealth of Nations".  
\* J.S. Mill \* Robert Malthus \* Adam Smith \* Robins
- iv. "Economics is the study of scarcity". Who said?  
\* Adam Smith \* J. S. Mill \* Robins \* Keynes
- v. What kind of commodity air is?  
\* Free good \* Economic Good \* Substitute good \* No one
- vi. Demand is related to  
\* A given period \* A given time period \* Given price and period \* None of these
- vii. Normal demand curve  
\* Can't be convex to the origin \* Can't to concave to the origin  
\* Can't be a straight line \* Can't be upward sloping upward to the right
- viii. Demand curve is related to the following :  
\* Price of substitute goods \* Price of commodity \* Time period \* None of these
- ix. National Income is also called  
\* National product \* Grass domestic product \* Gross national product \* All of these
- x. Gross Domestic product consists of total sum of all final goods and services which are  
\* Produced inside the country only \* Gained though foreign aid  
\* Produced both inside and outside the country \* Earned though expert
- xi. National Income does not included  
\* Wages \* Profit \* Transfer payments \* Interest
- xii. The Income method of measuring national income is also known as  
\* Value-added method \* Factor-payment method \* Expenditure method \* none of these
- xiii. Money performs the functions as  
\* Medium of exchange \* Standard of deferred payments  
\* Store of value \* All of these
- xiv. Money acts as a common measure of  
\* Price \* Value \* Purchasing power \* None of these
- xv. Money has removed the difficulty of  
\* Double coincidence \* Store of value \* Transfer of wealth \* all of these

**Micro Economics (Short Question) 20 Marks**

**Note: Attempt any five questions.**

1. Write differences between micro and macro economics?
2. State law of demand with the help of table and graph?
3. Define elasticity of demand?
4. State laws of return and laws of cost?
5. Define cost? Explain total fixed cost and marginal cost?
6. Write difference between supply and stock?
7. Define point and arc elasticity of demand?

**Macro Economics (Short Question) 20 Marks**

**Note: Attempt any five questions.**

1. Distinguish between Gross National Product and Gross Domestic Product?
2. Distinguish between Gross National Product and Net National Product?
3. To calculate National Income of a country, some adjustment have to be made. What are those adjustments?
4. How the National Income of a country is measured under Product Method?
5. What are the difficulties of Barter system?
6. How money has removed various difficulties of barter system?
7. Write down the functions of money?

**Note: Attempt one question from each section.**

**Micro (Long question) 10 Marks**

1. Explain law of diminishing marginal utility with the help of table and graph?
2. Define perfect competition? How a firm achieve equilibrium under perfect competition?

**Macro (Long Questions) 10 Marks**

1. Define National Income ? Explain its various concept?
2. Describe in detail characteristics of good money?

### **Answer Keys**

Wealth of Nations

the Principles of Eco

Adam Smith

Robins

Free good

Given price and period

Can't be upward sloping upward to the right

Price of substitute goods

Moves towards OX

Falls downward

At different prices

Increases price

Supply has been decreased

Price of the commodity

More than unit

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**MID TERM EXAMINATION 2016**

**Class: XI**  
**Paper: English**

**Max. Marks: 100**  
**Duration: 3 Hours**

**SECTION 'A'**  
**(MULTIPLE CHOICE QUESTIONS) – (M.C.Qs.)**

**Q1. Choose the correct answer for each from the given option: (20)**

- i) On the answer of question three king John swore by:  
\* St. Bittel                      \* St. John                      \* Masses                      \* Pope
- ii) The theme of the most of the northern ballads is:  
\* comic                      \* humanitarian                      \* tragic                      \* social
- iii) The staff of the UNO working in New York is consisted of:  
\* 1500 people                      \* 2500 people                      \* 3000 people                      \* 3500 people
- iv) The poem 'The Deserted Village' appeared in:  
\* 1770                      \* 1780                      \* 1785                      \* 1790
- v) Shakespeare belongs to this age:  
\* Victorian                      \* Elizabethan                      \* Modern                      \* Medieval
- vi) The number of the provinces included in Pakistan were:  
\* four                      \* five                      \* six                      \* seven
- vii) The number of Muslims who were left in India was about:  
\* forty million                      \* thirty million                      \* twenty five million                      \* fifty million
- viii) While facing sure death, Birkenhead is a story of unusual display of:  
\* weakness and chaos                      \* courage and discipline  
\* weakness and bravery                      \* laziness and sluggishness
- ix) Indonesia asked the UN to help them in their war against:  
\* Malaria                      \* Yaws                      \* Tuberculosis                      \* Chicken pox
- x) My Bank Account is a:  
\* humour                      \* tragedy                      \* comedy                      \* satire
- xi) 'My Bank Account' is taken from the book:  
\*The World of Science                      \*Literary Lapses  
\*Lyrical Ballads                      \*Collected Work of Leacock
- xii) The song 'Under the Greenwood Tree' occurred in:  
\*Act II, Scene V                      \*Act III, Scene VI                      \*Act II, Scene VII                      \*Act III, Scene VII
- xiii) The poem 'The Character of a Happy Life' is deeply a:  
\* humorous                      \* tragical                      \* religious                      \* serious
- xiv) A 'Happy man' is he who:  
\* does not serve another's will                      \* serves the rich  
\* serves the will of wicked man                      \* does not serve anyone at all
- xv) King John reigned England from:  
\*1199-1216                      \*1199-1215                      \*1199-1214                      \*1195-1212
- xvi) The word 'Crozier' means:  
\* staff of office                      \* tall cap                      \* gown                      \* cloak
- xvii) Abbot of Canterbury is one of the old:  
\* Eastern ballads                      \* Western ballads                      \* Northern ballads                      \* Southern ballads
- xviii) Goldsmith's village Auburn is in the:  
\* East of England                      \* West of England                      \* South of England                      \* North of England
- xix) In the poem 'The Deserted Village', to an English setting Goldsmith transferred the tragedy of:  
\* Scotland                      \* Ireland                      \* Netherland                      \* Wales
- xx) The landlords evicted tenants and depopulated villages when they found sheep farming:  
\*less profitable                      \*more profitable                      \*lesser profitable                      \*dangerous

**SECTION 'B' SHORT-ANSWER QUESTIONS (MARKS 50)**

**2. Answer any TEN questions from this section. All questions carry equal marks.**

- i. Why did not Kashmir join Pakistan?
- ii. Discuss the working and functions of UNESCO / WHO?
- iii. What is the philosophical idea portrayed in the poem "Under the Greenwood Tree"?
- iv. Pinpoint the qualities of a happy man as described by Sir Henry Wotton.
- v. What would have happened if the panic created on the ship?
- vi. What were the questions of King John and who gave the answer to those questions?
- vii. What had happened with the village Oliver Goldsmith loved most?
- viii. What inspired the foundation of UNO?
- ix. Why did the writer apply the word "terrible" to the first year of Pakistan's history as an independent state?
- x. Do you really think so that 'My Bank Account' is a real story of Stephen Leacock?
- xi. What mistake did the author commit in the bank?
- xii. Why was King John afraid of the Abbot of Canterbury?
- xiii. What changes were labeled against the Count of Morcerf?
- xiv. How was the Count of Monte Cristo avenged ?
- xv. What is an Arab Custom? And who is the follower of it in the play?

**SECTION 'C' (DETAILED-ANSWER QUESTIONS)**

**(30 Marks)**

**Note: Attempt all questions. All question carry equal marks:**

Q3. Write a letter to the newspaper editor concerning your views about the growing rate of Traffic Incidents.

OR

Write a story bas one the moral "Greed is a curse" OR "Union is strength"

Q4. Write an essay on one of the following:

- i) Role of Social Media.
- ii) Science in the service of mankind

Q5. Translate the following sentences in English:

- |  |                                    |   |
|--|------------------------------------|---|
| ۱۔ جب میں کالج پہنچا تو کھٹی بج چکی تھی۔ | ۲۔ ناچ نہ جانے آنگن ٹیڑھا۔         | ۳۔ اگر بارش نہیں ہوئی تو ہم بکنگ پر جائیں گے۔ |
| ۴۔ ہمیں وطن کی خدمت کرنی چاہئے۔          | ۵۔ ڈبل سواری پر پابندی اٹھ گئی ہے۔ | ۶۔ جیسا دلیس ویسا بھیس                        |
| ۷۔ نیکی کردار یا میں ڈال۔                | ۸۔ ہر چمکتی چیز سونا نہیں ہوتی۔    | ۹۔ جیسے کو تیسرا۔                             |
|  | ۱۰۔ غرور کا سر نیچا                |   |

**MID TERM EXAMINATION 2016**

وقت: ۲ گھنٹے

کل نمبر: ۵۰

نمبر: ۱۰

پاچہ: اسلامیات

جمہ: XI-A/B/C/XI-COM:)

وقت: ۲۰ منٹ

حصہ الف (کثیر الانتخابی سوالات)

سوال نمبر ۱: مندرجہ ذیل سوالات میں سے ہر ایک کیلئے درجہ ذیل جواب منتخب کیجئے۔

- ۱۔ اسلام کے لغوی معنی (خاموش رہنا، حکم ماننا، حکم تسلیم کرنا، تباہ کرنا) \* (۱۰، ۹، ۸، ۷)
- ۲۔ وہ فرشتہ جو ان کا اعمال \* مہ لکھتا ہے۔ (G) تکبیر، کراما کا •، حضرت جبرائیل اور اسرافیل، کوئی نہیں
- ۳۔ اسلامی آقا م تقویم کے مطابق رمضان کا مہینہ ہے۔ (۱۰، ۹، ۸، ۷)
- ۴۔ شرک کی اتنی قسمیں ہوتی ہیں (۱۔، دو، تین، چار)
- ۵۔ لفظ "آ" کے معنی ہے (ت، ث، ج، ح، خ، ع، گ، گھ، گھڑ، گھڑی، اشارہ، پتا)
- ۶۔ اسلام میں یہ عبادت \* سے پہلے فرض کی گئی (حج، روزہ، نماز، زکوٰۃ)
- ۷۔ جس میں وعدے کا \* س نہیں وہ (مسلم نہیں، محسن نہیں، مومن نہیں، منافق نہیں)
- ۸۔ اس سورت میں خالصتاً توحید کا ذکر ہے (الکوثر، الاخلاص، الناس، القریش)
- ۹۔ مشہور الہامی کتابیں (۱۰، ۸، ۳، ۲)
- ۱۰۔ قرآن مجید کی موجودہ \* ہے (توفیقی، توفیقی، زولی، توفیقی)

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MID TERM EXAMINATION 2016

وقت: اگھنڈہ ۴۰ منٹ

کل نمبر: ۴۰

پاچہ: اسلامیات

جمہ: XI-A/B/C/XI-COM:)

حصہ ب (مختصر جوابات کے سوالات)

(۱۰)

سوال نمبر ۲: مندرجہ ذیل قرآنی آیات واحادیث میں سے کسی پانچ کا اردو انگریزی میں ترجمہ کیجئے۔

۱- [áŠu] æ Ù, ĀŌmtŪ ħmäxŪ] á]

۲- [çÍħŭiYæĤnŪq äxŪ] ōfveŭçŪ' jÁ]æ

۳- èßŠu áç%ŭ] äxŪ] Ūç%..of ŪŌŪáĤ, iŌ

۴- pçŭŪ pŭtŪ] ōŌŪŪ]æ (I ħŭŕe ŪŪĤĤŪŪ]

۵- ä • tĤ æ äŪŪæ äŪ • Y]tu ŪxŠŪŪ] oxA ŪxŠŪŪ] ōŌ

۶- ŪŌŪi] äxŪ] ,ßĤ ŪŌŪŪ] á]

۷- äbrŪ] Ťt> àŪ æ Ĥnt> äxŪ] Ōx%ŪxA änt gx\_mĤnt> Ōx%àŪ

(۱۵)

سوال نمبر ۳: مندرجہ ذیل سوالات میں سے کسی پانچ کے جوابات تحریر کریں۔

۱- ختم t سے کیا مراد ہے۔

۲- صحاح ستہ کی کتب کے نام تحریر کریں۔

۳- یت سے کیا مراد ہے

۴- حفاظت قرآن سے متعلق کسی ای۔ آئی۔ کا ترجمہ تحریر کریں۔

۵- وحی کی اقسام تحریر کریں؟

۶- شرک کی اقسام تحریر کریں؟

۷- مقرب فرشتے کسے کہتے ہیں اور ان کے کام تحریر کریں؟

۸- کا • وحی سے کیا مراد ہے؟

حصہ ج (جوابات کے سوالات) (۱۵)

نوٹ: درج ذیل میں سے کسی دو کے جوابات تحریر کریں۔

سوال نمبر ۴: عقیدہ توحید کے K نی نذہ کی کیا اثبات مرتبہ ہوتے ہیں وضاحت کریں۔

سوال نمبر ۵: عقیدہ رسالت سے کیا مراد ہے کیا کرام کی خصوصیات تحریر کریں۔

سوال نمبر ۶: نماز کی اہمیت اور اسکے فوائد تحریر کریں۔





- x) The matrix  $\begin{bmatrix} 3 & 0 & 0 \\ 0 & 3 & 0 \\ 0 & 0 & 3 \end{bmatrix}$  is :
- \* Diagonal                      \* Scalar                      \* Unit                      \* Null
- xi) If angle  $\alpha$  in triangle ABC is in the standard position then
- \*  $a^2 = b^2 + c^2 - 2bc \cos \alpha$                       \*  $a^2 = b^2 + c^2 + bc \cos \beta$   
\*  $c^2 = a^2 + b^2 - 2ac \cos \gamma$                       \*  $\cos \beta = a^2 + c^2 - b + 2ac$
- xii) If matrix  $\begin{bmatrix} 7 & 3 \\ \lambda & 6 \end{bmatrix}$  is singular then  $\lambda$  is equal to :
- \* 14                      \* 13                      \* 12                      \* 11
- xiii) For a non-singular matrix A, we have  $A^{-1} =$ :
- \*  $\frac{Adj A}{|A|}$                       \*  $\frac{Adj A}{|A|}$                       \*  $|Adj A|$                       \*  $|A|$
- xiv) The value of determinant  $\begin{vmatrix} a & 0 & 0 \\ 0 & a & 0 \\ 0 & 0 & a \end{vmatrix}$  is
- \*  $a^3$                       \*  $2a$                       \*  $3a$                       \* 0
- xv)  $135^\circ$  in radians is :
- \*  $\frac{5\pi}{6}$                       \*  $150\pi$                       \*  $\frac{2\pi}{3}$                       \*  $\frac{3\pi}{4}$
- xvi) If  $\sin \theta < 0$  and  $\cos \theta > 0$ , then  $p(\theta)$  lies in the:
- \* 1<sup>st</sup> quadrant                      \* 2<sup>nd</sup> quadrant                      \* 3<sup>rd</sup> quadrant                      \* 4<sup>th</sup> quadrant
- xvii) The value of  $\tan \theta$  is positive in:
- \* 1<sup>st</sup> and 4<sup>th</sup> quadrant                      \* 1<sup>st</sup> and 3<sup>rd</sup> quadrant                      \* 2<sup>nd</sup> and 3<sup>rd</sup> quadrant                      \* 3<sup>rd</sup> and 4<sup>th</sup> quadrant
- xviii) If  $\tan \theta = \frac{-3}{4}$  and  $\sin \theta$  is -ve then  $p(\theta)$  lies in:
- \* 1<sup>st</sup> quadrant                      \* 2<sup>nd</sup> quadrant                      \* 3<sup>rd</sup> quadrant                      \* 4<sup>th</sup> quadrant
- xix)  $\sin(180+\theta) = ?$
- \*  $-\cos \theta$                       \*  $-\sin \theta$                       \*  $\cos \theta$                       \*  $\sin \theta$
- xx)  $\frac{1}{1+\tan^2 \theta} = ?$
- \*  $-\sec^2 \theta$                       \*  $\cos^2 \theta$                       \*  $\sec^2 \theta$                       \*  $\cot^2 \theta$

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**MID TERM EXAMINATION 2015**

Paper: Maths

Class: XI A-B

Max. Marks: 80

Time: 2 Hours 40 Minutes

**Section – B**

**(Short -Answers Questions) (80 Marks)**

**NOTE: Attempt any fifteen part questions from this section. All questions carry equal marks.**

- Q2 i) Prove that the roots of the equation  $y^2 - 2y\left(m + \frac{1}{m}\right) + 3 = 0$  are real for all  $m \in R$
- ii) Prove that cube roots of -125 are  $-5, -5\omega, -5\omega^2$  and their sum is zero (where  $\omega$  is the complex cube root of unity)
- iii) Solve the equation  $\sqrt{1+x} + \frac{1}{\sqrt{1+x}} = 2\frac{1}{2}$
- iv) If  $\alpha$  and  $\beta$  are the roots of the equation  $pt^2 + qt + q = 0, p \neq 0$  prove that  $\sqrt{\frac{q}{p}} + \sqrt{\frac{\alpha}{\beta}} + \sqrt{\frac{\beta}{\alpha}} = 0$
- v) Determine the value of  $k$  for which the roots of the equation of the following equation are equal:  
 $(k+1)x^2 + 2(k+3)x + 2k+3 = 0$
- vi) If  $\alpha$  and  $\beta$  are the roots of the equation  $lx^2 + mx + n, l \neq 0$  find the equation whose roots are  $3+\alpha$  and  $3+\beta$
- vii) A piece of plastic strip 1 meter long is bent to form an isosceles triangle with  $95^\circ$  as its largest angle. find the length of the sides.
- viii) Prove that  $\omega^{49} + \omega^{101} + \omega^{150} = 0$ , where  $\omega$  is a complex cube root of unity.
- ix) Prove that:  $\frac{1}{r^2} + \frac{1}{r_1^2} + \frac{1}{r_2^2} + \frac{1}{r_3^2} = \frac{a^2 + b^2 + c^2}{\Delta^2}$
- x) Find the value of  $k$  if  $\begin{bmatrix} 5 & 8 & 2 \\ 0 & k & 2 \\ 9 & -8 & 4 \end{bmatrix}$  is a singular matrix.:
- xi) Solve for  $x$ :  
$$\begin{bmatrix} -2 & 3 \\ 4 & -1 \end{bmatrix} \begin{bmatrix} 1 & x & 5 \\ 2 & 4 & x \end{bmatrix} \begin{bmatrix} -3 \\ 1 \\ 0 \end{bmatrix} = [2-14]^t$$
- xii) Find the area of triangle ABC when  $\alpha = 70^\circ 4', \gamma = 60^\circ 5', C = 39.1cm$   
Where  $\omega$  is a complex cube root of unity.

xiii) If possible, find the matrix  $X$  such that  $\begin{bmatrix} 2 & -3 \\ 0 & 1 \end{bmatrix} \cdot X = \begin{bmatrix} -2 & 5 \\ 8 & -7 \end{bmatrix}$ .

xiv) Verify that  $(AX)^t = X^t A^t$  where  $A = \begin{bmatrix} 1 & -1 & 2 \\ 2 & 1 & 0 \end{bmatrix}$  and  $X = \begin{bmatrix} 2 & 1 \\ 0 & 2 \\ 1 & -1 \end{bmatrix}$ .

xv) How far does a boy on a bicycle travel in 10 revolutions if the diameter of the wheels of his bicycle is each equal to 56 cm?

xvi) Using the definition of radian function find the remaining trigonometric functions if  $\cos \theta = \frac{1}{2}$  and  $\tan \theta$  is positive, find the remaining trigonometric function

xvii) By using the properties of determinants, prove that  $2(x^3 + y^3) = \begin{vmatrix} x+y & x & y \\ y & x+y & x \\ x & y & x+y \end{vmatrix}$

xviii) Apply Cramer's Rule to solve the following system of equations:

$$\begin{aligned} x+2y+z &= 8 \\ 2x-y+z &= 3 \\ x+y-z &= 0 \end{aligned}$$

xix) Using the properties of determinants, show that:

$$\begin{vmatrix} 1 & 1 & 1 \\ a & b & c \\ a^2 & b^2 & c^2 \end{vmatrix} = (a-b)(b-c)(c-a)$$

xx) Prove any two of the following:

a)  $\frac{\cot \theta + \operatorname{cosec} \theta}{\sin \theta + \tan \theta} = \operatorname{cosec} \theta \cot \theta$

b)  $\frac{\sin 7\theta - \sin 5\theta}{\cos 7\theta + \cos 5\theta} = \tan \theta$

c)  $\frac{\sin 3\theta}{\sin \theta} - \frac{\cos 3\theta}{\cos \theta} = 2$

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**MID TERM EXAMINATION 2015**

Paper: Maths  
Class: XI-C

Max. Marks: 10  
Time: 20 Minutes

**Section – A**

**(Multiple Choice Question) – (MCQs)**

**Q1 Choose the correct answer for each of the following**

- i) The product of all cube roots of unity is :  
\* 0                      \*  $\omega$                       \* 1                      \* -1
- ii) If roots of the equation  $ax^2 + bx + c = 0$  are real then  $b^2 - 4ac$  is  
\* -ve                      \* +ve                      \* 0                      \* perfect square
- iii) The product of the roots of the equation  $2x^2 - 6x - 15 = 0$  is:  
\* -15                      \* 15                      \*  $\frac{15}{2}$                       \*  $\frac{15}{2}$
- iv) If roots of a quadratic equation are 2 and -2, then the equation is:  
\*  $x^2 - 4 = 0$                       \*  $x^2 + 4 = 0$                       \*  $x^2 + 2 = 0$                       \*  $x^2 - 2 = 0$
- v) If  $4^{x+1} = 64$ , then  $x =$   
\* 2                      \* 3                      \* 4                      \* -2
- vi) If  $\omega$  is a complex cube root of unity then  $\omega^{16} =$ :  
\* 0                      \*  $\omega^2$                       \*  $\omega$                       \* 1
- vii) If the roots of the equation  $ax^2 + bx + c = 0$  are unequal then  $b^2 - 4ac$  is:  
\* less than zero                      \* equal to zero                      \* greater than zero                      \* equal to  $i$
- viii) The matrix  $\begin{bmatrix} 1 & 2 & 3 \end{bmatrix}^t$  is a :  
\* row matrix                      \* column matrix                      \* singular matrix                      \* non singular matrix
- ix) The matrix  $\begin{bmatrix} 3 & 0 & 0 \\ 0 & 3 & 0 \\ 0 & 0 & 3 \end{bmatrix}$  is :  
\* Diagonal                      \* Scalar                      \* Unit                      \* Null
- x) If matrix  $\begin{bmatrix} 7 & 3 \\ \lambda & 6 \end{bmatrix}$  is singular then  $\lambda$  is equal to :  
\* 14                      \* 13                      \* 12                      \* 11

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**MID TERM EXAMINATION 2015**

Paper: Maths

Class: XI-C

Max. Marks: 90

Time: 1 Hour 40 Minutes

**Section – B**

**(Short -Answers Questions) (80 Marks)**

**NOTE: Attempt any Eleven part questions from this section. All questions carry equal marks.**

- Q2i) Prove that the roots of the equation  $y^2 - 2y\left(m + \frac{1}{m}\right) + 3 = 0$  are real for all  $m \in R$
- ii) Prove that cube roots of -125 are  $-5, -5\omega, -5\omega^2$  and their sum is zero (where  $\omega$  is the complex cube root of unity)
- iii) Solve the equation  $\sqrt{1+x} + \frac{1}{\sqrt{1+x}} = 2\frac{1}{2}$
- iv) If  $\alpha$  and  $\beta$  are the roots of the equation  $pt^2 + qt + q = 0, p \neq 0$  prove that  $\sqrt{\frac{q}{p}} + \sqrt{\frac{\alpha}{\beta}} + \sqrt{\frac{\beta}{\alpha}} = 0$
- v) Determine the value of  $k$  for which the roots of the equation of the following equation are equal:  
 $(k+1)x^2 + 2(k+3)x + 2k+3 = 0$
- vi) If  $\alpha$  and  $\beta$  are the roots of the equation  $lx^2 + mx + n, l \neq 0$  find the equation whose roots are  $3+\alpha$  and  $3+\beta$
- vii) Prove that  $\omega^{49} + \omega^{101} + \omega^{150} = 0$ , where  $\omega$  is a complex cube root of unity.
- viii) Find the value of  $k$  if  $\begin{bmatrix} 5 & 8 & 2 \\ 0 & k & 2 \\ 9 & -8 & 4 \end{bmatrix}$  is a singular matrix
- ix) Solve for  $x$ :  
 $\begin{bmatrix} -2 & 3 \\ 4 & -1 \end{bmatrix} \begin{bmatrix} 1 & x & 5 \\ 2 & 4 & x \end{bmatrix} \begin{bmatrix} -3 \\ 1 \\ 0 \end{bmatrix} = [2-14]^t$
- x) If possible, find the matrix  $X$  such that  $\begin{bmatrix} 2 & -3 \\ 0 & 1 \end{bmatrix} \cdot X = \begin{bmatrix} -2 & 5 \\ 8 & -7 \end{bmatrix}$ .
- xi) Verify that  $(AX)^t = X^t A^t$  where  $A = \begin{bmatrix} 1 & -1 & 2 \\ 2 & 1 & 0 \end{bmatrix}$  and  $X = \begin{bmatrix} 2 & 1 \\ 0 & 2 \\ 1 & -1 \end{bmatrix}$ .
- xii) By using the properties of determinants, prove that  $2(x^3 + y^3) = \begin{vmatrix} x+y & x & y \\ y & x+y & x \\ x & y & x+y \end{vmatrix}$
- xiii) Apply Cramer's Rule to solve the following system of equations:  
 $x+2y+z=8$   
 $2x-y+z=3$   
 $x+y-z=0$
- xiv) Using the properties of determinants, show that:  $\begin{vmatrix} 1 & 1 & 1 \\ a & b & c \\ a^2 & b^2 & c^2 \end{vmatrix} = (a-b)(b-c)(c-a)$





- x) The matrix  $\begin{bmatrix} 3 & 0 & 0 \\ 0 & 3 & 0 \\ 0 & 0 & 3 \end{bmatrix}$  is :  
 \* Diagonal                      \* Scalar                      \* Unit                      \* Null
- xi) The middle term in expansion of  $(a + b)^{2n}$  is:  
 \*  $n^{\text{th}}$  term                      \*  $(n+1)^{\text{th}}$  term                      \*  $(2n-1)^{\text{th}}$  term                      \*  $(2n+1)^{\text{th}}$  term
- xii) If matrix  $\begin{bmatrix} 7 & 3 \\ \lambda & 6 \end{bmatrix}$  is singular then  $\lambda$  is equal to :  
 \* 14                      \* 13                      \* 12                      \* 11
- xiii) For a non-singular matrix A, we have  $A^{-1} =$ :  
 \*  $\frac{AdjA}{|A|}$                       \*  $\frac{AdjA}{|A|}$                       \*  $|Adj A|$                       \*  $|A|$
- xiv) The value of determinant  $\begin{vmatrix} a & 0 & 0 \\ 0 & a & 0 \\ 0 & 0 & a \end{vmatrix}$  is  
 \*  $a^3$                       \*  $2a$                       \*  $3a$                       \* 0
- xv)  $135^\circ$  in radians is :  
 \*  $\frac{5\pi}{6}$                       \*  $150\pi$                       \*  $\frac{2\pi}{3}$                       \*  $\frac{3\pi}{4}$
- xvi) If  $\sin\theta < 0$  and  $\cos\theta > 0$ , then  $p(\theta)$  lies in the:  
 \* 1<sup>st</sup> quadrant                      \* 2<sup>nd</sup> quadrant                      \* 3<sup>rd</sup> quadrant                      \* 4<sup>th</sup> quadrant
- xvii) The value of  $\tan\theta$  is positive in:  
 \* 1<sup>st</sup> and 4<sup>th</sup> quadrant                      \* 1<sup>st</sup> and 3<sup>rd</sup> quadrant                      \* 2<sup>nd</sup> and 3<sup>rd</sup> quadrant                      \* 3<sup>rd</sup> and 4<sup>th</sup> quadrant
- xviii) If  $\tan\theta = \frac{-3}{4}$  and  $\sin\theta$  is -ve then  $p(\theta)$  lies in:  
 \* 1<sup>st</sup> quadrant                      \* 2<sup>nd</sup> quadrant                      \* 3<sup>rd</sup> quadrant                      \* 4<sup>th</sup> quadrant
- xix)  $\sin(180+\theta) = ?$   
 \*  $-\cos\theta$                       \*  $-\sin\theta$                       \*  $\cos\theta$                       \*  $\sin\theta$
- xx)  $\frac{1}{1+\tan^2\theta} = ?$   
 \*  $-\sec^2\theta$                       \*  $\cos^2\theta$                       \*  $\sec^2\theta$                       \*  $\cot^2\theta$

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**MID TERM EXAMINATION 2016**

Paper: Maths  
Class: XI A-B

Max. Marks: 80  
Time: 2 Hours 40 Minutes

**Section – B**

**(Short -Answers Questions) (80 Marks)**

**Q2. Attempt any five questions.**

- i) Prove that the roots of the equation  $y^2 - 2y\left(m + \frac{1}{m}\right) + 3 = 0$  are real for all  $m \in R$
- ii) Prove that cube roots of -125 are -5,  $-5\omega$ ,  $-5\omega^2$  and their sum is zero (where  $\omega$  is the complex cube root of unity)
- iii) Solve the equation  $\sqrt{1+x} + \frac{1}{\sqrt{1+x}} = 2\frac{1}{2}$
- iv) If  $\alpha$  and  $\beta$  are the roots of the equation  $pt^2 + qt + q = 0, p \neq 0$  prove that  $\sqrt{\frac{q}{p}} + \sqrt{\frac{\alpha}{\beta}} + \sqrt{\frac{\beta}{\alpha}} = 0$
- v) Determine the value of  $k$  for which the roots of the equation of the following equation are equal:  
 $(k+1)x^2 + 2(k+3)x + 2k + 3 = 0$
- vi) If  $\alpha$  and  $\beta$  are the roots of the equation  $lx^2 + mx + n, l \neq 0$  find the equation whose roots are  $3+\alpha$  and  $3+\beta$
- vii) Solve the system of equations

$$x + y = 5, \frac{3}{x} + \frac{2}{y} = 2$$

**Q3. Attempt any four questions.**

- i) Find the value of  $k$  if  $\begin{bmatrix} 5 & 8 & 2 \\ 0 & k & 2 \\ 9 & -8 & 4 \end{bmatrix}$  is a singular matrix.:
- ii) Solve for  $x$ :

$$\begin{bmatrix} -2 & 3 \\ 4 & -1 \end{bmatrix} \begin{bmatrix} 1 & x & 5 \\ 2 & 4 & x \end{bmatrix} \begin{bmatrix} -3 \\ 1 \\ 0 \end{bmatrix} = [2 \ -14]^t$$

- iii) If possible, find the matrix  $X$  such that  $\begin{bmatrix} 2 & -3 \\ 0 & 1 \end{bmatrix} \cdot X = \begin{bmatrix} -2 & 5 \\ 8 & -7 \end{bmatrix}$ .

- iv) Apply Cramer's Rule to solve the following system of equations:

$$x+2y+z=8$$

$$2x-y+z=3$$

$$x+y-z=0$$

v) By using the properties of determinants, prove that  $2(x^3 + y^3) = \begin{vmatrix} x+y & x & y \\ y & x+y & x \\ x & y & x+y \end{vmatrix}$

**Q4. Attempt any four questions.**

i) Prove by Mathematical Induction:

$$1^2 + 3^2 + 5^2 + \dots + (2n - 1)^2 = \frac{1}{3}n(2n-1)(2n+1)$$

ii) Prove the following proposition by the method of Mathematical Induction:  $2^{3n+2} - 28n - 4$  is divisible by 49,  $\forall n \in \mathbb{N}$ .

iii) Find the first negative term in the expansion of  $(1 + 2x)^{\frac{7}{2}}$ , using the formula for general term

iv) If  $|x| < 1$ , prove that  $\frac{\sqrt{1+x} + 3\sqrt{(1-x)^2}}{1+x+\sqrt{1+x}} = \left(1 - \frac{5}{6}x\right)$  nearly. (F)

v) If  $y = \frac{3}{4} + \frac{3.5}{4.8} + \frac{3.5.7}{4.8.12} + \dots$ , prove that  $y^2 + 2y - 7 = 0$ .

**Q5. Attempt any two questions:**

i) Prove any two of the following:

a)  $\frac{\cot \theta + \operatorname{cosec} \theta}{\sin \theta + \tan \theta} = \operatorname{cosec} \theta \cot \theta$

b)  $\frac{1 + \sec \theta}{1 - \sec \theta} = \frac{\tan \theta + \sin \theta}{\sin \theta - \tan \theta}$

c)  $\sqrt{\frac{1 - \cos \theta}{1 + \cos \theta}} = \operatorname{cosec} \theta - \cot \theta$

ii) How far does a boy on a bicycle travel in 10 revolutions if the diameter of the wheels of his bicycle is each equal to 56 cm?

iii) Using the definition of radian function find the remaining trigonometric functions if  $\cos \theta = \frac{1}{2}$  and  $\tan \theta$  is positive, find the remaining trigonometric function

**FIRST YEAR**  
**PHYSICS**

Note: Attempt any ten questions from sec “B”, two from sec “C” and sec “A” is compulsory.

Timing: 3 Hours

Max;Marks: 85

**SECTION “A”**

- i. Two parallel vectors of magnitudes of 4 units and 3 units are added this resultant has the magnitude of.  
5unit                      7unit                      9unit                      11unit
- ii. If  $\vec{A} \cdot \vec{B} = 0$  and  $\vec{A} \times \vec{B} = 0$  and  $\vec{A} \neq 0$ , the vector  $\vec{B}$  is;  
Equal to  $\vec{A}$                       Zero                      Perpendicular to  $\vec{A}$                       Parallel to  $\vec{A}$
- iii. If  $\vec{A} = a\hat{i}$  and  $\vec{B} = b\hat{j}$ , Then  $\vec{A} \times \vec{B}$  will be:  
 $ab\hat{k}$                       0                       $-ab\hat{k}$                       None of these
- iv.  $(\hat{i} \times \hat{j}) \cdot \hat{k}$  is equal to.  
Zero                       $\hat{j}$                        $-\hat{k}$                       One
- v. A package is dropped from a high bridge. At the end of 3sec of free fall, the speed of the package is.  
9.8m/sec                      29.4m/sec                      100m/sec                      2.9m/sec
- vi. A body starting from rest travels 120 m in 8th second. Assuming the motion to be uniform, its acceleration is.  
15                      16                      10                      20
- vii. A person covers half of its journey at a speed of 40 m/s and the other half at 50 m/s. His average speed during the whole journey is.  
45 m/s                      46 m/s                      48 m/s                      44.1 m/s
- viii. A helicopter of mass  $3 \times 10^3$  kg rises vertically with constant speed of 25 m/s. what resultant force is exerted on the helicopter?  
Zero                       $3 \times 10^4$ N downward                       $3 \times 10^4$ N upward                      None
- ix. If a projectile has some horizontal range at an angle of elevation of  $15^\circ$  then its range will be the same when the angle of elevation is equal to.  
 $30^\circ$                        $45^\circ$                        $75^\circ$                        $90^\circ$
- x. A ball is thrown horizontally from a height of 400m with a muzzle velocity of 100m/s. It experiences a horizontal acceleration equal to.  
 $50\text{m/s}^2$                        $9.8 \text{ m/s}^2$                       zero                       $4.9 \text{ m/s}^2$
- xi. In projectile motion of the following angle will result the maximum range.  
 $20^\circ$                        $45^\circ$                        $90^\circ$                        $60^\circ$
- xii. The expression for the time period of an object moving with constant speed v along a circle of radius r is given by.  
 $4\pi r/v$                        $2\pi r/v$                        $\pi r/v^2$                        $\pi r^2/v$
- xiii. One radian is equal to.  
5.73 egress                      573 degrees                      57.3 degrees                      53.7 degree
- xiv. The dimensions of linear momentum are.  
 $\text{MLT}^{-1}$                        $\text{MLT}^{-2}$                        $\text{ML}^2\text{T}^{-1}$                       MLT
- xv. The dimensions of work are.  
 $\text{MLT}^{-1}$                        $\text{ML}^2\text{T}^{-2}$                        $\text{ML}^2\text{T}^{-1}$                       MLT
- xvi. The number of significant figures in 0.0034 are.  
4                      3                      2                      1
- xvii. The famous book Al – Qanun al – Masudi is written by.  
Al – Biruni                      Omar Khyyam Ibn – Al – Haitham                      Al – Masudi

## SECTION "B"

- i. Show that followings are dimensionally correct.
- ii.  $T = 2\pi\sqrt{L/g}$  and  $2aS = V_f^2 - V_i^2$
- iii. show that  $\vec{v} = \vec{r} \times \vec{\omega}$  and  $\vec{a} = \vec{r} \times \vec{\alpha}$ .
- iv. In the game of cricket, why it is easy to catch the ball of high trajectory?
- v. Compute the acceleration of an object moving down along the inclined plane.
- vi. Is it possible for two falling bodies of different masses to have the same momentum while striking the ground? Explain.
- vii. Prove that  $(\vec{A} \times \vec{B}) = -(\vec{B} \times \vec{A})$  and  $(\vec{A} \cdot \vec{B})^2 + |\vec{A} \times \vec{B}|^2 = A^2 B^2$ .
- viii. If  $\vec{A}$  and  $\vec{B}$  are two adjacent side of a parallelogram then show that  $|\vec{A} \times \vec{B}|$  represents the area of parallelogram.
- ix. A projectile is fired with a horizontal velocity of 300m/s from the top of cliff 100m height how long will it take to reach the ground and how far from the foot of cliff will it strike the ground.
- x. A string one meter long break when its tension is 69.9N. Find greatest speed at which a ball of mass 2kg can be whirled with the string in a vertical circle.
- xi. A wooden block 10Kg of mass is suspended by a long cord that can swing as a pendulum. A 50gm bullet is fired which lodges itself into the block. Due to the impact, the center of gravity of the block is raised by 10cm. what was the initial speed of the bullet?
- xii. A motor car is moving up a slope of  $30^\circ$  with the velocity of 72km/hour, suddenly the engine fails. How much the car move before coming to rest. Assume the friction to be negligible.
- xiii. Find the angle between  $\vec{A} = 6\hat{i} + 6\hat{j} - 3\hat{k}$  and  $\vec{B} = 2\hat{i} + 3\hat{j} - 6\hat{k}$ .
- xiv. Calculate the work done, if the force  $\vec{F} = 2\hat{i} + 3\hat{j}$  displaces an object from the position vector  $\vec{r}_a = \hat{i} + 3\hat{j}$  to  $\vec{r}_b = 5\hat{i} - 7\hat{j}$ .
- xv. Two possible angles to hit a target by a mortar shell fired with initial velocity of 98m/s are  $15^\circ$  and  $75^\circ$ . Calculate the range of projectile and the minimum time to hit the target.

## SECTION "C"

- Q1: (a) Compute the resultant force and its direction of two forces  $F_1$  and  $F_2$  with the help of addition of vectors by rectangular component method.  
b) Define linear momentum with SI base unit and explain the law of conservation of linear momentum.
- Q2: (a) Two masses  $m_1$  and  $m_2$  are attached to the ends of a string passes over a frictionless pulley such that they hang vertically downward. Suppose  $m_1 > m_2$  then find out the acceleration and tension in the string.  
b) Define projectile motion with its limitations. A shell is fired with initial velocity  $\vec{V}_0$  at an angle  $\theta$  with ground, then find the expression for; time to reach the maximum height and maximum height.
- Q3: (a) Define the uniform circular motion and derive an expression for centripetal acceleration.  
b) Define scalar product of two vectors with examples and discuss its characteristic properties.

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**MID TERM EXAMINATION 2015**

Subject: P.O.C

Class: XI Com

Max Marks: 75

Time: 3 Hours

**Time: 20 Minutes**

**SECTION 'A' (Multiple Choice Questions)**

**Max Marks: 16**

**Q1. Choose the correct answer for each from the given option:**

- i. Production is a part of  
a) Economics      b) Profession      c) Industry      d) Marketing
- ii. Oil industry belongs to  
a) Extract Industry      b) Analytical Industry      c) Both of the above      d) none of the above
- iii. Loans to business are provided by  
a) Shareholders      b) Partners      c) Bank      d) A and B      e) B and C
- iv. Semi-skilled labor includes  
a) Denter      b) Mechanic      c) School Teacher      d) All of the above      e) A and B
- v. Long-term investment goes to  
a) Buying machines      b) Renting plant      c) Hiring labor      d) Buying raw material
- vi. Risk is the problem faced by  
a) A bank      b) A business      c) An insurance company      d) Management of a company      e) All of the above
- vii. Secrecy in sole proprietorship refers to the safety of  
a) Formulas      b) Business statistics      c) Special plans      d) Accounts      e) All of the above
- viii. Sole proprietorship enjoys the benefits of  
a) Personal interest      b) Secrecy      c) Credit standing      d) All of the above      e) None of the above
- ix. Partnership is dissolved by  
a) Admission of a partner      b) Retirement of a partner      c) The expiry of a contracted period  
d) None of the above      e) All of the above
- x. One who participates in the conduct of partnership business is known as  
a) Sleeping partner      b) Minor partner      c) Nominal partner      d) Active partner      e) All of the above
- xi. Partnership is dissolved by \_\_\_\_\_.  
a) Differences of opinion      b) withdrawal of a partner      c) change of capital
- xii. Accounts are published or printed by a \_\_\_\_\_.  
a) Private company      b) Partnership      c) Public company
- xiii. Issuance of prospectus for a private company is \_\_\_\_\_.  
a) Optional      b) Compulsory      c) Choice of the Registrar
- xiv. Societies are formed in the field of  
a) Banking      b) Housing      c) Farming      d) Credit      e) All of the above
- xv. \_\_\_\_\_ deals in commercial, trading and banking activities  
a) Agricultural credit society      b) Agricultural non-credit society      c) Non-agricultural credit society
- xvi. \_\_\_\_\_ does not deal commercial activities  
a) Agricultural credit society      b) Non-agricultural credit society      c) Joint stock company

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**MID TERM EXAMINATION 2015**

Subject: P.O.C

Class: XI Com

Max Marks: 59

Time: 2 Hours 40 Minutes

**SECTION 'B' (Short-Answer Questions) 35 Marks**

**Note: Answer any seven questions.**

1. Define the following terms:  
Business , commerce , economics , profession, marketing, industry, trade
2. Are the business problems of continuing nature. Why?
3. Explain sole proprietorship form of business ownership. What are its merits and demerits?
4. What is the suitability of sole proprietorship? For what type of business of will choose this form of business organization?
5. What are the kinds of partners? What are their duties, rights and liabilities?
6. What is a minor partner? What are his rights and liabilities to the business?
7. Define a company. Also describe its characteristics.
8. What are the articles of association ? What are its contents.
9. What are the characteristics of cooperative societies? Explain.
10. What are the kinds of cooperative societies? Highlight them.

**SECTION 'C' (Detailed-Answer Questions) 24 Marks**

**Note: Attempt any two questions.**

1. What are the business problems? (or what factors are to be considered in starting a new business?) or what are the essentials of establishing a business house?
2. What is limited partnership? What are its essentials? Elaborate your answer.
3. What are the advantages and disadvantages of a company? Explain in detail.

### **Answer Keys**

Wealth of Nations

the Principles of Eco

Adam Smith

Robins

Free good

Given price and period

Can't be upward sloping upward to the right

Price of substitute goods

Moves towards OX

Falls downward

At different prices

Increases price

Supply has been decreased

Price of the commodity

More than unit

**MID TERM EXAMINATION 2015**

پے چہ اردو

جماعت: گیارہویں

حصہ الف (کثیر الانتخابی سوالات)

سوال نمبر ۱: مندرجہ ذیل سوالات میں سے ہر ایک کیلئے درست جواب منتخب کیجئے۔

- ۱۔ انہیں اردو کا پہلا نفاذ کہا جاتا ہے۔
- ۲۔ شوکت تھانوی کا یہ مضمون نصاب میں شامل ہے۔
- ۳۔ حضرت یحییٰ اور سلطان صلاح الدین ایوبی کے مزارات واقع ہیں۔
- ۴۔ نصاب میں شامل خط نام حبیب الرحمن شيروانی اس مزاحیہ شاعر کا تحریر کردہ ہے۔
- ۵۔ اس مزاح نگار نے اپنے سفر نامہ میں ایک مسجد کو موضوع بنایا ہے۔
- ۶۔ مراۃ العروس کے خالق کے نام ہے۔
- ۷۔ ماما عظمت کا کردار انہوں نے تخلیق کیا۔
- ۸۔ اردو کا بے مثل تمثیل نگار انہیں کہتے ہیں۔
- ۹۔ ایک شام ماضی کے محرابوں میں کے مصنف ہیں۔
- ۱۰۔ اردو اس زبان کا لفظ ہے۔
- ۱۱۔ سرسید نے مسلمانوں کی اصلاح کیلئے یہ رسالہ جاری کیا۔
- ۱۲۔ نصاب میں شامل شفیق الرحمن کے مزاحیہ مضمون کا نام ہے۔
- ۱۳۔ اردو نثر کو ناول سے روشناس کرانے کا سہرا کس کے سر ہے۔
- ۱۴۔ اس مورخ نے تاریخ کو فلسفہ سے روشناس کرایا۔
- ۱۵۔ ناولوں میں اسلامی تاریخ پر مبنی ناول کی ابتدا انہوں نے کی۔
- ۱۶۔ اس نثر نگار کو اردو نثر کا مورث اعلیٰ کہا جاتا ہے۔
- ۱۷۔ میر انیس کے مرثیہ کا جز کس نام سے نصاب میں شامل ہے۔
- ۱۸۔ گچ اور جھوٹے کارزم نامہ ان کا تحریر کردہ ہے۔
- ۱۹۔ تحریک آزادی کی کنگش کو ضد بیچہ مستور نے اپنے اس ناول میں بیان کیا ہے۔
- ۲۰۔ نصاب میں شامل غالب کا تعزیتی خط ان کے نام ہے۔

کل نشانات ۵۰

حصہ ب (مختصر جوابات کے سوالات)

سوال نمبر ۲ (الف) مندرجہ ذیل میں سے کسی ایک اقتباس کی تشریح کریں۔

(ب) تشریح کردہ اقتباس کے مصنف کے نام تحریر کریں۔

(ج) تشریح کردہ اقتباس کے سبق کا عنوان تحریر کریں۔

(الف) یہ ایک شیوہ نثر سو دہانا روزگار کا ہے۔ تعزیت یوں ہی کیا کرتے ہیں اور یہی کہا کرتے ہیں کہ صبر کرو۔ ہارے ایک کا کیچہ کٹ گیا اور لوگ اسے کہتے ہیں کہ تہ نہ تڑپ۔ بھلا کیوں کرتے تڑپے گا۔ صلاح اس امر میں نہیں بتائی جاتی۔ دعا کا دخل نہیں، دوا کا لگاؤ نہیں۔

(ب) سرسید نے علیگزہد میں مسلمانوں کے سیاسی حقوق کے تحفظ کیلئے قدم اٹھایا لیکن بالعموم ان کی قومی سیاست یہی تھی کہ مسلمان ملکی سیاست سے الگ تھلگ رہیں اور پہلے مغربی علوم کے حصول سے اپنی قوم کی حالت درست اور مضبوط کریں۔

(ج) تواریخ سے ثابت ہے کہ ایک قوم کسی قدر صحت ترقی کی حالت پر رہتی ہے اور اس کے بعد ترقی مسدود ہو جاتی ہے، مگر یہ دیکھنا چاہیے کہ یہ ترقی کب مسدود ہوتی ہے۔ یہ اس وقت مسدود ہوتی ہے جبکہ اس قوم میں سے وہ قوت اٹھ جاتی ہے جس کے سبب سے نئی نئی باتیں پیدا ہوتی ہیں اور ٹھیک ٹھیک مسلمانوں کا اس زمانہ میں یہی حال ہے۔

سوال نمبر ۳: مندرجہ ذیل اشعار میں سے صرف تین کی تشریح شاعر کے حوالہ سے کریں۔

- (۱) ہم پرورش لوح و قلم کرتے رہیں گے
- (۲) مری طرح سے مدد ہر بھی ہیں آوارہ
- (۳) ناچتے ہم مجبوروں پر یہ تہمت ہے مختاری کی
- (۴) ہاں گنہی ایام ابھی اور بڑھے گی
- (۵) طوفان نوح تو ڈوبی ز میں فقط
- (۶) سب رقیبوں سے ہے ماخوش پر زمان مصر سے

سوال نمبر ۴ (الف) مندرجہ ذیل میں سے کسی ایک جز کی تشریح کریں۔

(ب) تشریح کردہ جز کی نظم کا نام تحریر کریں۔

(ج) تشریح کردہ جز کے شاعر کا نام تحریر کریں۔

- (۱) چلنا وہ با صبح کے جھوگوں کا دم دم
- وہ آب و تاب نہر وہ موجوں کا تیغ و خم
- کھا کھا کے دس اور بھی ہنرہ ہرا ہوا
- مرغان باغ کی وہ خوش المانیان بہم
- سردی ہوا میں پر نہ زیادہ بہت کم
- تھاموتیوں سے دامن صحرا بھرا ہوا

- (۲) خلد میں حوریں تری مشتاق ہیں آنکھیں اٹھا
- جن وانساں میں کسی نے بھی نہیں جن کو چھوا
- نیچی نظریں جن کا زیور جن کی آرائش حیا
- جن کی باتیں عطر میں ڈوبی ہوئی جیسے صبا

کب تک آخر اپنے رب کی نعمتیں جھٹلائے گا

(الف) مندرجہ ذیل میں سے کیس ایک نظم کا مرکزی خیال تحریر کریں۔

(ب) منتخب کردہ نظم کے شاعر کا نام تحریر کریں۔

(ج) منتخب کردہ نظم کے شاعر کا مختصر تعارف تحریر کریں۔

- تعلیمات نبوی ، سورہ رحمن ، ٹیپو سلطان کی وصیت

سوال نمبر ۵ (الف) مندرجہ ذیل میں سے کسی ایک کا خلاصہ تحریر کریں۔

(ب) منتخب کردہ مضمون کے مصنف کا نام تحریر کریں۔

(ج) منتخب کردہ مضمون کے مصنف کا مختصر تعارف تحریر کریں۔

- ماما عظمت ، بانیسکل کی تعلیم ، میل اور میں

سوال نمبر ۶: مندرجہ ذیل میں سے کسی دو کی تعریف معاً مثال تحریر کریں۔

مقطع ، قافیہ ، مطلع ، تلخیص

حصہ ج (تفصیلی جوابات کے سوالات) کل نشانات ۳۰

سوال نمبر ۷: مندرجہ ذیل میں سے کسی ایک نثر نگار کے طرزِ نثر پر تبصرہ کریں۔

- ڈیپٹی نذیر احمد ، سرسید احمد خان ، بطرس بخاری ، محمد حسین آزاد

سوال نمبر ۸: مندرجہ ذیل میں سے کسی ایک شاعر کے اسلوب پر تبصرہ کریں۔

- مرزا غالب ، علامہ اقبال ، میر تقی میر ، نظیر اکبر آبادی