

1 hour's

XI Sc Maths

Max Mark 25

Q No1: Attempt the following

16

1. If $A = \begin{bmatrix} k & 4 \\ 2 & 1 \end{bmatrix}$ is singular matrix, find k.
2. Find the equation of the line perpendicular to x-axis.
3. Evaluate $\lim_{x \rightarrow 3} \left(\frac{x^3 - 27}{x + 3} \right)$
4. Find 5th term in the expansion in $(x+1)^4$
5. If $P(A) = 0.3$, then find $p(A')$ and $P(A \cap A')$.
6. Find matrix X, if $2A + X = I$, where $A = \begin{bmatrix} 3 & -1 \\ -5 & 2 \end{bmatrix}$.
7. A box contain 6 red and 5 blue balls, 2 balls drawn at random, then find $n(S)$.
8. Find the slope of lines passing through origin and making an angle of 30 degree with x-axis.

Q. No.2: Attempt any three of the following. 09

1. Find x and y, if

$$\begin{bmatrix} x \\ y \end{bmatrix} = \left\{ 3 \begin{bmatrix} 2 & 0 & 1 \\ -3 & 4 & 7 \end{bmatrix} - 2 \begin{bmatrix} 0 & 4 & -3 \\ 1 & 5 & -2 \end{bmatrix} \right\} \begin{bmatrix} 1 \\ 2 \\ 3 \end{bmatrix}$$

2. In ΔABC , $A = (1, -2)$, $B = (3, 1)$ and $C = (0, 5)$, then find the equation of attitude from A.3. Evaluate, $\log_{x \rightarrow \sqrt{2}} \frac{x^2 - 3\sqrt{2}x + 4}{x^3 + 7\sqrt{2}x - 9\sqrt{2}}$ 4. Find mid term in the expansion of $\left(\sqrt{x} + \frac{1}{x} \right)^6$.5 if $P(A) = 1/2$, $P(B') = 2/3$ and $P(A \cup B) = 2/3$, then find $P(A \cap B)$.

7/1/17 1st session

x1 Bio

II UNIT TEST -2017

Biology

Time : 1 hrs

Max. Marks : 25

Note : 1. All questions are compulsory.

2. Answers to the questions in section-I and section-II should be written in TWO separate answer books.

3. Questions from section I attempted in the answer book of section II and vice-versa will not be assessed.

4. Draw neat and labeled diagrams wherever necessary.

5. Figures to right indicate full marks.

SECTION-I

Q1. Select and write the most appropriate answer from the given alternatives for each sub-question.

(4)

1. The fruit ripening hormone is _____.

- a) ethylene b) auxin c) cytokinin d) abscisic acid

2. Which of the following is a long day plant? _____.

- a) Radish b) Cosmos c) Dahlia d) Marigold .

3. During metaphase chromosomes _____.

- a) becomes short and thick
b) get arranged at the equator
c) duplicate and divide
d) move to the respective poles.

4 Re-appearance of nucleolus is during _____.

- a) telophase b) prophase c) cytokinesis d) interkinesis

Q2. Answer each question in one sentence only. (Any 4)

(4)

- i. What is synapsis?
- ii. What is Chiasmata ?
- iii. Define Photoperiodism.
- iv. Define Vernalization.
- v. Define Grand Period of growth.

Q3. Attempt any TWO of the following. (Any 2)

(4)

- i. Name the sub stages of Prophase I.
- ii. Define cell division and cell cycle.
- iii. Give phases of Growth.
- iv. Draw Growth curve.

SECTION II

Q.1. Select and write the most appropriate answer from the given alternatives for each sub question. (any 5) (05)

- (i) _____ is absent in Plant cell
(a) lysosome (b) chloroplast
(c) nucleus (d) mitochondria
- (ii) Mitochondria carry out the functions of _____
(a) Respiration (b) photosynthesis (c) transpiration (d) digestion
- (iii) Which cell organelle is surrounded by two membrane
(a) Lysosome (b) vacuole
(c) peroxisomes (d) mitochondria
- (iv) Salivary amylase brings about the digestion of _____
(a) protein (b) carbohydrate
(c) fats (d) vitamins
- (v) Gastric juice contain _____
(a) H_2SO_4 (b) HCl (c) bile (d) amylase
- (vi) Largest gland of human body is _____
(a) pancreas (b) liver
(c) salivary gland (d) thyroid

Q.2. Answer the following questions in one or two sentence each. (any 4) (04)

- (i) What is the function of bile?
(ii) Compare the exocrine endocrine part of pancreas.
(iii) Give the human dental formula.
(iv) Define cell.
(v) What is totipotency?
(vi) Which cell organelle is called suicide bags?

Q.3. Attempt any two of the following

- (i) Distinguish between plant cell and animal cell
(ii) Sketch and label ultra structure of mitochondria
(iii) Describe the structure and function of stomach
(iv) Write short note on kwashiorkor

(04)

5/1/17 1st session
XI Chemistry

RIZVI COLLEGE OF ARTS, SCIENCE & COMMERCE

BANDRA (W)

SECOND -

EXAM, JANUARY 2017 - F.Y.J.C

TIME : 1.00 Hr. - UNIT TEST

CHEMISTRY

Max. Marks: 25

- Note :
1. All questions are compulsory.
 2. Figures to the right indicate full marks.
 3. Write balanced chemical reactions wherever necessary.
 4. Use of logarithmic table is allowed.

SECTION - I

Q .1. Select and write the most appropriate answer from the given alternatives for each (2) sub question.

- The SI unit of Amount of substance is,
 - a) Kelvin
 - b) kilogram
 - c) °C
 - d) Mole
- In the modern periodic table the elements are arranged in
 - a) Increasing Mass
 - b) increasing atomic volume
 - c) increasing atomic number
 - d) alphabetically

Q.2 Answer the following (Any Two) (4)

- Write derived units of the following .
 - (i) Acceleration
 - (ii) Density
- Define
 - (i) Periods
 - (ii) Groups
- Explain Gay Lussac's Law of combining volumes of gases.

OR

- What is homogeneous mixture? Give one example.

Q.3. Answer the following (Any Two) (6)

- Explain with one example Law of definite composition .
- What is Dobereiner's triads . Explain with one example .
- Explain the formation of water molecule on the basis of sp^3 hybridization .

OR

- Explain the formation of acetylene molecule on the basis of sp hybridization .

Continue.....

7/1/17 1st session
XI Comp. Sci.

SUB: COMPUTER SCIENCE

CLASS: XI

Time: 1 Hr

MAX. MARKS: 25

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- NOTE: 1. All questions are compulsory.
2. Draw neat diagrams wherever necessary.
3. Figures to the right indicate full marks
4. Use of any type of calculator is not allowed
5. Due credit will be given for the programs with appropriate comments
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Q. 1. Select the correct alternative and rewrite the following:

5

- i) _____ bitwise operator is used for bitwise NOT
a) ~ b) >> c) | d) None of these
- ii) _____ is a C++ keyword.
a) break b) constants c) classes d) type
- iii) = is a _____ operator.
a) Relational b) Logical c) Assignment d) Scope resolution
- iv) The decimal equivalent of binary number 11001 is
a) 24 b) 25 c) 31 d) None of these
- v) _____ is not a Basic Logic Gate.
a) AND b) NOT c) NOR d) None of these

Q.2. Attempt any one of the following:

5

- a) Write the algorithm for Addition of Set of numbers.
b) Draw a Neat labelled Diagram of a Visual Basic Project.

Q.3. Attempt any two of the following:

- a) How will you build NOT and OR gates using NAND gate.
- b) Draw VI Characteristic of PN Junction Diode.
- c) What are Full Adder? Draw the Truth Table and Circuit Diagram of Full Adder.

6

Q.4. Attempt any three of the following:

- a) Write a note on different type of Scanners.
- b) Explain the rules for defining a Variable in Visual Basic.
- c) $(193675)_{10} - (3771)_8 \rightarrow (\quad)_8$ [Use 2's complement Method]
- d) Write the Syntax for IF -Then---Else in Visual Basic.

9

7/11/17 1st session
XI Electronics

Marks 25

Electronics PI PII

1 Hour

- Note: i] All questions are compulsory.
ii] Figures to the right indicate full marks.
iii] Draw neat diagram wherever necessary.
iv] Use of Log table is allowed. Calculator is not allowed

Q.1 A. Select the correct alternative and rewrite the following sub questions. [04]

- i) PMMC is basically _____ measuring instrument.
a) Current b) Voltage c) Power d) None of these
- ii) When current carrying conductor is placed in magnetic field it experience a _____.
a) Power b) Energy c) Torque d) None of these
- iii) _____ is the most popular biasing technique used in Transistor
a) Fixed bias B) Emitter feedback c) Voltage divider bias d) None of these
- iv) In transistor AC 549, First letter A indicates _____.
a) Silicon b) Germanium c) Carbon d) None of these.

Q.1 B. Explain Construction and working of PMMC [06]

Draw neat front view diagram. State principle of working of PMMC?

Q.3 Attempt any Two of the following. [10]

- i) Compare Series type ohm meter with Shunt type Ohm meter.
ii) Explain the working of fixed bias. Write its disadvantages.
iii) Write a note on AYRTON shunt method to increase the range(s) of current.

Q.4 Attempt any ONE of the following. [05]

- i). How to draw load line on Transistor output characteristics? Explain shifting of operating point on load line.
ii) Write procedure to test NPN Transistor.

7/1/17 1st session

XI MCVC ET-III

SECOND UNIT TEST EXAMINATION (M.C.V.C.) JANUARY 2017

ELECTRONICS TECHNOLOGY PAPER – 3 MAXIMUM MARKS : 25

DIGITAL ELECTRONICS

DURATION : ONE HOUR

Q.1) A) Fill in the blanks (5M)

- i) _____ a basic circuit with two stable states. (Flip Flop/ Register)
- ii) Group of flip flop that can store binary information is _____. (register / counter)
- iii) RS flip flop is constructed using two cross coupled _____ gates. (NAND / AND)
- iv) A T flip flop divides the clock frequency by _____ (2 / 3).
- v) Registers are used to form _____ (ring counter/ resistor).

Q.1) B) Match the following. (5M)

- | A | B |
|-----------------|-----------------------------------|
| 1) Register | a) Solves the forbidden condition |
| 2) Flip flop | b) Data conversion |
| 3) Counter | c) Latch |
| 4) JK flip flop | d) Count number clock pulse |
| 5) D flip flop | e) Solves race around condition |

Q.1) C) State whether true or false (5M)

- 1) In a RS flip flop the condition $S = R = 1$ is a forbidden state.
- 2) To store one bit one flip flop is used.
- 3) There exists only positive edge triggered flip flops.
- 4) In registers data can be placed in serial or parallel form.
- 5) Registers can be used to form sequence generator.

Q.2) Answer any two questions. (10M)

- 1) Draw logic diagram of RS flip flop using NAND gates. Give its truth table.
- 2) Give five applications of registers.
- 3) Draw a block diagram of JK flip flop and give its truth table.

5/1/17 1st session
X) ~~com~~.MCVC ET-II

SECOND UNIT TEST EXAMINATION (M.C.V.C.) JANUARY 2017
ELECTRONICS TECHNOLOGY PAPER – 2 MAXIMUM MARKS : 25
BASIC ELECTRONICS DURATION : ONE HOUR

Q.1) A) Fill in the blanks (5M)

- i) an _____ is a device which converts DC power into AC power.
(Amplifier/ oscillator)
- ii) Electromagnetic radiations are used in _____ communication. (radio / verbal)
- iii) NPN and PNP are two types of _____. (transistors / capacitors)
- iv) For proper amplification the emitter-base junction is _____ biased and the emitter- collector junction is _____ biased. (forward/ reverse)

Q.1) B) Match the following. (5M)

- | A | B |
|-------------------------|--------------------------------|
| 1) Voltage divider bias | a) Medium frequency oscillator |
| 2) Hartley oscillator | b) Maximum power dissipation. |
| 3) RC phase shift | c) Change in wave shape. |
| 4) Class A amplifier | d) Electro magnets |
| 5) Distortion | e) Low frequency oscillator. |

Q.1) C) State whether true or false (5M)

- 1) An oscillator is a circuit which produces an output energy without an input energy .
- 2) A rapid to and fro motion of electrons in a conductor produces electromagnetic radiations.
- 3) The main application of transistors is rectification.
- 4) Common base amplifier is the most popular type of transistor configuration.
- 5) For an oscillator circuit to work negative feedback is essential.

Q.2) Answer any two questions. (10M)

- 1) Draw a neat diagram of two stage RC coupled amplifier.
- 2) Give the symbols of i) NPN transistor ii) PNP transistor.
- 3) Draw a Hartley oscillator and give the equation for its output frequency.