

Seat No.	
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M.Sc. (Semester - II) (CBCS) Examination Oct/Nov-2017
Electronics Science
FUNDAMENTALS OF ELECTRONICS

Day & Date: Monday, 27-11-2017
 Time: 10.30 AM to 01.00 PM

Max. Marks: 70

- Instructions:** 1) Q.1 and Q.2 are compulsory.
 2) Attempt any three questions from Q. no. 3 to Q. no. 7.
 3) Figures to the right indicate full marks.

Q.1 A) Select correct alternatives.

06

- 1) The unit of power is

a) Ohms	b) Watts
c) Current	d) Volts
- 2) For any transistor there exit number of S parameters are

a) 2	b) 4
c) 3	d) 5
- 3) The unit of potential difference is

a) Watts	b) Volts
c) Ampere	d) Ohms
- 4) Output impedance of FET is

a) High	b) Low
c) Moderate	d) None of these
- 5) IC 741 is a

a) Timer	b) Op.amp
c) Regulator	d) Counter
- 6) Power supplies basically converts

a) dc to ac	b) ac to dc
c) ac to ac	d) dc to dc

B) State True or False

04

- 1) Active element generates power.
- 2) Resistance of photo diode decreased with the increase of intensity of light.
- 3) Schmitt trigger gives square wave output for any type of input wave.
- 4) The maximum current capacity of three pin regulator IC is 1 amp.

C) Fill in the blanks.

04

- 1) Out of active device is _____ than input.
- 2) The algebraic sum of the current at a node is zero. This law is called _____.
- 3) The gain of op. amp non inverting amplifier is _____ than inverting amplifier.
- 4) Active filters are basically constructed using IC _____.

Q.2	Write short notes.	
	a) Application of KCL and KVL.	05
	b) Biasing of p-n junction and its characteristics.	05
	c) Working of precision rectifier.	04
Q.3	a) What do you understand by Maximum power transfer theorem? Derive the equation at which the power in the load is maximum.	08
	b) List the advantages of active devices over passive devices.	06
Q.4	a) With a neat diagram explain the working of FET amplifier.	08
	b) Define LED and explain its working principle, advantages and disadvantages.	06
Q.5	a) With a neat diagram explain the working of first order low filter and derive the equation of gain.	08
	b) Explain the use of Norton's theorem to simplify a network.	06
Q.6	a) Define multivibrator, explain the working of monostable multivibrator and mention its applications.	08
	b) Draw the various sections present in an Ideal operation amplifier and explain the function of each unit.	06
Q.7	a) Draw the circuit diagram of AC and DC operational amplifier and explain their working.	08
	b) Draw the circuit diagram of astable multivibrator using IC 555 and explain its working.	06

- 10) The order of the planets, away from sun are
 a) Mercury, Neptune, Mars b) Venus – Mars - Mercury
 c) Jupiter – Venus – Mars d) Mars – Saturn - Uranus
- 11) The final stage of a star is _____.
 a) Giant b) Supergiant
 c) White dwarf d) None of these
- 12) One of the huge Radio telescope in India is installed at _____.
 a) Ooty b) Nainital
 c) Kodaikanal d) Naryan gaon
- 13) Escalator velocity of earth is _____.
 a) 25 km s^{-1} b) 50 km s^{-1}
 c) 12 km s d) 18 km s^{-1}
- 14) The GTO is at the height of _____.
 a) 36000 km b) 34000 km
 c) 32000 km d) 38000 km

Q.2 Answer in brief.

- a) Convert the given decimal number 177 in octal and binary. **04**
 b) What are Low enriched uranium and high enriched uranium. How they differ from Natural Uranium? What are their uses? **05**
 c) What are pros and cons of coal industry? **05**

- Q.3** a) What are rectifiers? Give different types of full wave rectifiers. **08**
 b) Classify ICs according to number of circuits per chip. **06**

- Q.4** a) Give in details the different resources of conventional and non conventional energy resources. **09**
 b) What is a biomass energy? Give an account of bio fuels. **05**

- Q.5** a) How on earth the temperature and pressure varies at different heights from sea surface level? What are the parts of atmosphere? **08**
 b) Compare reflecting and refracting telescope. **06**

- Q.6** a) How solar energy is harnessed? Give details of photo voltaic process? **09**
 b) Mars. **05**

Q.7 Write notes on:

- a) Blue tooth. **04**
 b) Reflecting telescope types. **05**
 c) Brahmas missile. **05**

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M.Sc. (Semester - II) (CBCS) Examination Oct/Nov-2017
Chemistry
INSTRUMENTAL METHODS OF ANALYSIS

Day & Date: Monday, 27-11-2017
 Time: 10.30 AM to 01.00 PM

Max. Marks: 70

- Instructions:**
- 1) Attempt in all five questions.
 - 2) Section-I is compulsory.
 - 3) Attempt any two questions from Section-II and any two questions from Section –III.
 - 4) Answer to all questions (Section I, II and III) should be written in same One answer book.
 - 5) All question carry equal marks.
 - 6) Figures to the right indicate full marks.
 - 7) Use of log tables and calculators is allowed.

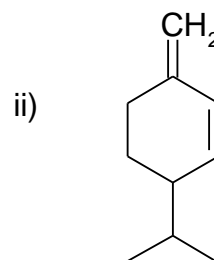
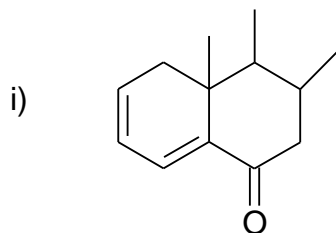
Section – I

- Q.1 Answer the following** **14**
- 1-Pheryl ethanol shows the base peak at m/z 107 due to _____ ion.
 - Name the factors affecting chemical shift.
 - What is the nuclear spin value for C^{12} and O^{16} nuclei?
 - Define absorbance.
 - The most intense peak in the mass is known as _____ peak.
 - Define coupling constant.
 - Name the different types of atomizers used in AAS.
 - What is the function of nebulizer in ICP?
 - Define spin-spin relaxation.
 - Which is most abundant peak in alkyl aniline?
 - Predict the transition involved in methyl chloride.
 - The n-propyl cyclohexene shows the base peak _____
 - Write the wavelength range of finger print region in IR.
 - Predict the modes of vibration in ethane molecule.

Section – II

- Q.2**
- Explain in the brief construction and working of plasma torch. **07**
 - Deduce the structure of an organic compound on the basis of following data: **07**
 Molecular Formula: C_3H_5ON
 UV-NO λ max above 200 nm
 IR-2941-2857, 2247, 1460 cm^{-1}
 PMR (δ): 4.8, 3H, s; 3.5, 2H, s
- Q.3**
- Define the term chemical shift. Explain the shielding and deshielding effect. **07**
 - Explain the effect of following factors on vibrational frequencies in IR spectroscopy. **07**

- Q.4** a) What is the basic principle of AAS? Explain the difference types of interference in AAS. **07**
- b) With the help of Woodward and Fieser's rules Calculate the λ_{max} values for following compounds. **07**



Section – III

- Q.5** a) Explain TMS is used as internal standard in PMR spectroscopy. **05**
- b) Give applications of ICP-AES. **05**
- c) Describe fragmentation pattern of ethyl benzene. **04**
- Q.6** a) Explain the fragmentation pattern in n-propyl cycloalkane and 1-butanol. **05**
- b) Discuss in brief spin-spin coupling. **05**
- c) Explain in brief Anisotropic effect. **04**
- Q.7** **Write a notes (any three):** **14**
- a) Sample handling in IR Spectroscopy
- b) Chemical shift
- c) McLafferty rearrangements
- d) Quantitative applications of UV-Visible Spectrophotometer

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M.Sc.(Semester - II) (CBCS) Examination Oct/Nov-2017
Mathematics
FUNDAMENTALS IN MATHEMATICS

Day & Date: Monday, 27-11-2017
 Time: 10.30 AM to 01.00 PM

Max. Marks: 70

- Instructions:** 1) Attempt five questions.
 2) Q no. 1 & Q. no. 2 are compulsory.
 3) Attempt any three questions from Q. no. 3 to Q. no. 7.
 4) Figures to the right indicate full marks.

Q.1 A) Select correct Alternatives of the following question: 05

- 1) The system of equation $x - 2y = 1$ & $-x + 3y = 3$ has
 - a) Unique solution
 - b) Infinite solution
 - c) No solution
 - d) None of these
- 2) If $\text{rank } A < \text{rank } [A, B] = \text{number of unknowns}$ then the system of equation have
 - a) Unique solution
 - b) Infinite solution
 - c) No solution
 - d) None of these
- 3) Which of the following is not vector space
 - a) $R(R)$
 - b) $C(C)$
 - c) $R(C)$
 - d) $C(CR)$
- 4) The number of elements in two bases of a finite dimensional vector space is
 - a) Equal
 - b) Unequal
 - c) May or may not be equal
 - d) None of these
- 5) Union of two linearly dependent sets of vectors is
 - a) Linearly dependent
 - b) Linearly independent
 - c) May or may not be linearly independent
 - d) None of these

B) Fill in the blanks 05

- 1) Any subset containing $(n+1)$ vectors, of an n -dimensional vector space linearly _____.
- 2) $V = W_1 \oplus W_2 \Leftrightarrow V = W_1 + W_2$ if _____
- 3) If $T: V_1 \rightarrow V_2$ is a linear transformation then $T(x + y) = \underline{\hspace{2cm}}$.
- 4) If two rows or columns of A are identical then $\det(A) = \underline{\hspace{2cm}}$.
- 5) The Inverse of elementary matrix is _____.

C) State whether true or false. 04

- 1) Any homogeneous system of linear equation has at least one solution.
- 2) A matrix Q is invertible iff $\det(Q) \neq 0$
- 3) The span of ϕ is ϕ .
- 4) The vector space $M_{n \times n}(F)$ has dimension mn

- Q.2** **A)** Find the rank of matrix $A = \begin{bmatrix} 1 & 2 & -1 & 3 \\ 2 & 4 & -4 & 7 \\ -1 & -2 & -1 & -2 \end{bmatrix}$ **03**
- B)** Prove that The Inverse of square matrix A exists iff $|A| \neq 0$ **04**
- C)** Prove that Let $T : V \rightarrow W$ be linear transformation then range T is subspace of W **03**
- D)** Define : **04**
- 1) Augumented matrix
 - 2) Solution of the system of equation
- Q.3** **A)** Show that If V is vector space over F & $W \subseteq V$ then W is a subspace of V iff it hold **07**
- i. $0 \in W$
 - ii. $x + y \in W$ when $x, y \in W$
 - iii. $C \cdot x \in W$ when $C \in F$ & $x \in W$
- B)** Find the solution of the system **07**
- $$\begin{aligned} 5x_1 - 3x_2 - 7x_3 + x_4 &= 10 \\ -x_1 + 2x_2 + 6x_3 - 3x_4 &= -3 \\ x_1 = x_2 + 4x_3 - 5x_4 &= 0 \end{aligned}$$
- Q.4** **A)** Prove that Let V & W be vector space & $T : V \rightarrow W$ be linear then T is one – one if & only if $N(T) = \{0\}$ **07**
- B)** 1) Find whether the vectors $2x^3 + x^2 + x + 1, x^3 + 3x^2 + x - 2, x^3 + 2x^2 - x + 3$ of $R[x]$, **07**
- The vector space of all polynomials over the real number field R are linearly dependent or not.
- Q.5** **A)** Define matrix & Explain the types of matrices with example. **07**
- B)** Find the inverse of the matrix **07**
- $$A = \begin{bmatrix} 1 & 2 & 1 \\ 3 & 2 & 3 \\ 1 & 1 & 2 \end{bmatrix}$$
- Q.6** **A)** Determine whether or not the following vectors form a basis of R^3 **06**
- i. $(1, 1, 2), (1, 2, 5), (5, 3, 4)$
 - ii. $(1, 2, -1), (1, 0, 2), (2, 1, 1)$
- B)** State & prove the Replacement Theorem. **08**
- Q.7** **A)** State & prove Rank – Nullity theorem **08**
- B)** Define Elementary matrix & Explain Elementary matrix operations. **08**

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M.Sc. (Semester - II) (CBCS) Examination Oct/Nov-2017
Statistics
STATISTICAL METHODS

Day & Date: Monday, 27-11-2017
 Time: 10.30 AM to 01.00 PM

Max. Marks: 70

- Instructions:** 1) Attempt five questions.
 2) Q no. 1 & Q. no. 2 are compulsory.
 3) Attempt any three questions from Q. no. 3 to Q. no. 7.
 4) Figures to the right indicate full marks.
 5) Non-programmable / simple calculator is allowed.

Q.1 A) Choose the correct Answer:

10

- 1) If a constant value 5 is subtracted from each observation of set then the variance is.
 - a) Increased by 25
 - b) Decreased by 25
 - c) Decreased by 5
 - d) Not changed
- 2) If correlation coefficient $r = 0$ then the two regression lines are _____.
 - a) Perpendicular to each other
 - b) Parallel to each other
 - c) Coincide
 - d) None of these
- 3) If one regression coefficient is greater than one then the other must be _____.
 - a) Equal to one
 - b) Less than one
 - c) Greater than one
 - d) None of these
- 4) The mean age of group of 10 students is 20 years today. What was their mean age in the same month before 10 years?
 - a) 13
 - b) 12
 - c) 11
 - d) 10
- 5) If distribution of 10 scores has median of 25. If the highest score increased by 3 points, then median will become _____.
 - a) 25
 - b) 25.5
 - c) 28
 - d) Cannot be determined without additional information
- 6) If one card is drawn at random from a well shuffled pack of 52 cards, then the probability that the card is diamond will be _____.
 - a) $\frac{1}{4}$
 - b) $\frac{3}{4}$
 - c) $\frac{1}{13}$
 - d) $\frac{1}{2}$
- 7) For Bernoulli distribution, mean is 0.6 then $P(X = 0)$ is _____.
 - a) 0.6
 - b) 0.5
 - c) 0.4
 - d) 0.3

- Q.6** **A)** Define normal distribution. Discuss the properties of normal distribution. **07**
- B)** A life time of a certain battery is a random variable which has an exponential distribution with mean 320 hours. Find the probability that such a battery will last at most 160 hours. Also find the probability that a battery will last between 640 and 960 hours. **07**
- Q.7** **A)** Describe a test procedure for testing hypothesis $H_0: \mu = \mu_0$ against alternative $H_1: \mu \neq \mu_0$ for a large sample. The mean life time of 100 electric blubs produced by a manufacturing company is estimated to be 1570 hours with standard deviation of 120 hours. If μ is the mean life time of all blubs produced by the company, test the hypothesis $\mu = 1600$ against the alternative $\mu \neq 1600$ hours using level of significance 0.05. **07**
- B)** The mean weight of 150 students in a certain is 60 kgs. The mean weight of boys in the class is 70 kgs and that of girls is 55 kgs. Find the number of boys and girls in the class. **07**

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**M.Sc. (Semester - II) (CBCS) Examination Oct/Nov-2017
Computer Science
OFFICE AUTOMATION**

Day & Date: Monday, 27-11-2017
Time: 10.30 AM to 01.00 PM

Max. Marks: 70

Instructions: 1) Q no. 1 & Q. no. 2 are compulsory.

2) Attempt any three questions from Q. no. 3 to Q. no. 7

3) Figures to the right indicate full marks.

Q.1 A) Choose the correct Answer: 10

- 1) Which of the following keyboard shortcut can be used for creating a chart from the selected cells?
 - a) F11
 - b) F10
 - c) F4
 - d) F2
- 2) The cell reference for a range of cell that starts in cell C1 and goes over to column H and down to row 10 is?
 - a) C1 : 10H
 - b) C1 : H10
 - c) C1 : H-10
 - d) C1 : H :10
- 3) How we can view a cell comment?
 - a) Position the mouse pointer over the cell
 - b) Click the comment command on the view menu
 - c) Click the edit comment commands on the Insert menu
 - d) Click the Display comment command on the window menu
- 4) Where can you find the horizontal split bar on MS Word screen?
 - a) On the left of horizontal scroll bar
 - b) On the right of horizontal scroll bar
 - c) On the top of vertical scroll bar
 - d) On the bottom of vertical scroll bar
- 5) Word has Web authoring tools allow you to incorporate _____ on Web pages.
 - a) Bullets
 - b) Hyperlinks
 - c) Sounds
 - d) All of the above
- 6) Ms-Word automatically moves the text to the next line when it reaches the right edge of the screen and is called?
 - a) Carriage Return
 - b) Enter
 - c) Word Wrap
 - d) None of the above
- 7) A character that is raised and smaller above the baseline is known as.
 - a) Raised
 - b) Outlined
 - c) Capsript
 - d) Superscript
- 8) Which of the following do you use to change margins?
 - a) Formatting toolbar
 - b) Page setup dialog box
 - c) Standard toolbar
 - d) Paragraph dialog box

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M.Sc. (Semester - II) (CBCS) Examination Oct/Nov-2017
Computer Science
LINUX OPERATING SYSTEM

Day & Date: Monday, 27-11-2017
 Time: 10.30 AM to 01.00 PM

Max. Marks: 70

- Instructions:** 1) Q no. 1 & Q. no. 2 are compulsory.
 2) Attempt any three questions from Q. no. 3 to Q. no. 7
 3) Figures to the right indicate full marks.

Q.1 A) Choose the correct Answer:

10

- 1) Which hardware architecture are not supported by red Hat.
 - a) SPARC
 - b) IBM- compatible
 - c) Alpha
 - d) Macintosh
- 2) Which TCP / IP protocol is used to remove terminal connection service.
 - a) UDP
 - b) RARP
 - c) FTP
 - d) TELENET
- 3) In kernel signals are used to notify a process of certain _____.
 - a) Desion
 - b) Faults
 - c) Strategies
 - d) None of the above
- 4) Total no. of run levels in a Linux system?
 - a) 6
 - b) 7
 - c) 5
 - d) 8
- 5) In Linux everything stored as a _____.
 - a) File
 - b) Directory
 - c) Executable
 - d) None of the above
- 6) Which of the following is not a communication command.
 - a) Mail
 - b) Meg
 - c) Grep
 - d) Write
- 7) Which command is used to set terminal IO characteristic?
 - a) tty
 - b) ctty
 - c) ptty
 - d) stty
- 8) In the shell by default, all variables are considered stored as.
 - a) string
 - b) integer
 - c) charcter
 - d) float
- 9) Which command is used to copy files and directories.
 - a) copy
 - b) cp
 - c) rm
 - d) cpy
- 10) Which of the following command in used to access an SMB share on a Linux system.
 - a) NFS
 - b) SMD
 - c) Smbclient
 - d) Smbserver

- B) State whether true or false. 04**
- 1) By default if any regular file is created the number of link is displayed as 1.
 - 2) The mv command will preserve the meta data of the file.
 - 3) The login shell is the shell program that authenticates the user while logging in.
 - 4) Effective user id can be set using 4744 permission.
- Q.2 A) Write short note on following. 08**
- 1) Kernel
 - 2) RPM
- B) Answer the following. 06**
- 1) How do you execute the shell script
 - 2) Compare the features of Unix and Linux system.
- Q.3 Answer the following.**
- A) What do you mean by the term X-windows? Explain components of X-windows. 07**
- B) Explain the entire booting process of Linux operating system. 07**
- Q.4 Answer the following.**
- A) How Red Hat package manager is used to install and update package? Describe it. 07**
- B) What is DHCP? Explain with an example.**
- Q.5 Answer the following.**
- A) What is vi editor? Explain various modes of vi editor. 07**
- B) Discuss various system administrative task. Mention the importance configuration files and purposes. 07**
- Q.6 Answer the following.**
- A) Explain file system of Linux operating system? 07**
- B) Discuss the communication facilities in Linux operating system? 07**
- Q.7 Answer the following.**
- A) Write a shell program to count the number of files and sub directories in the specified directory. 07**
- B) What is samba? Where do we use it. Explain with example. 07**

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M.Sc. (Semester - II) (CBCS) Examination Oct/Nov-2017
Biotechnology
IMMUNOLOGY AND IMMUNO TECHNIQUES

Day & Date: Monday, 27-11-2017
 Time: 10.30 AM to 01.00 PM

Max. Marks: 70

Instructions: 1) All question of Section I are compulsory.
 2) Answer any four questions from Section II.

Section – I

Q.1 A) Choose the correct alternative and rewrite the sentences: 07

- 1) _____ cells express CD4 marker and recognize only antigen associated with class II MHC molecules.

a) T _H	b) T _C
c) NK	d) Dendritic
- 2) _____ is primary mediator of anaphylaxis.

a) Prostaglandins	b) Histamine
c) Leukotrienes	d) Thromboxane
- 3) Antibodies labeled with enzymes were used in _____ test.

a) Complement fixation test	b) Radioimmunoassay
c) ELISA	d) Immunofluorescence
- 4) Eye lens protein is an example of _____.

a) Hapten	b) Heterophile
c) Auto antigen	d) Isoantigen
- 5) _____ test is used in diagnosis of syphilis.

a) VDRL	b) Widal
c) Tuberculin	d) Montoux
- 6) Most abundant class of immunoglobulin in body is _____.

a) Ig G	b) Ig M
c) Ig A	d) Ig E
- 7) The killing of target cell by T_C cell is due to _____.

a) Perforins	b) Granzymes – degrading enzymes
c) Fas – Fas Ligand interaction	d) All of these

B) Define the following terms: 07

- 1) Autoimmunity and hypersensitivity
- 2) Complement components
- 3) Radioimmunoassay
- 4) Define Attenuated vaccines with two examples.
- 5) Necrosis and apoptosis.
- 6) Give any two non-organ specific autoimmune diseases.
- 7) Adjuvant and mitogen

Section – II

- Q.2** Give structural, morphological, cultural, life cycle and pathogenicity characters, of *Mycobacterium tuberculosis*. **14**
- Q.3** Explain mechanism of autoimmunity **14**
- Q.4** Write an essay on T cell mediated immunity. **14**
- Q.5** **Answer any two of the following:** **14**
- a) Explain structure of MHC class I molecule.
 - b) Organs of primary lymphoid organs of immune system.
 - c) Cytokine properties and function.
- Q.6** **Answer any TWO of the following:** **14**
- a) Traditional vaccines
 - b) Lectin pathway
 - c) Processing and presentation of endogenous antigen

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M.Sc. (Semester - II) (CBCS) Examination Oct/Nov-2017
Electronics
SIGNALS AND SYSTEMS

Day & Date: Monday, 27-11-2017
 Time: 10.30 AM to 01.00 PM

Max. Marks: 70

- Instructions:** 1) Q no. 1 & Q. no. 2 are compulsory.
 2) Attempt any three questions from Q. no. 3 to 7
 3) Attempt five questions.

Q.1 A) Choose the correct Answer:

08

- 1) The system characterized by the equation $y(t) = ax(t) + b$ is _____.
 a) Linear for any value of b b) Linear if $b > 0$
 c) Linear if $b < 0$ d) Non-linear
- 2) Which of the following is purely odd signal?
 a) $x(t) = Ae^{at}$ b) $x(t) = A\sin\omega_0 t$
 c) $x(t) = e^{j\omega_0 t}$ d) $x(t) = t^2$
- 3) If a periodic signal has an even symmetry, the fourier series contains _____.
 a) Only sine terms b) Only cosine terms
 c) Both sine & cosine term d) Constant and cosine term
- 4) Unit step function represented as
 a) $u(n) = \sum_{m=-\infty}^n \delta(m)$ b) $\int_{-\infty}^t \delta(\tau) \cdot d\tau = u(t)$
 c) $\delta(n) = u(n) - u(n - 1)$ d) Both a & b
- 5) The continuous time system describe by $y(t) = x(t^2)$ is _____.
 a) Causal, linear and time varying
 b) Causal, non-linear and time varying
 c) Non causal, non- linear and time invariant
 d) Non causal, linear and time-invariant
- 6) The unit parabolic function is denoted by _____.
 a) $P(t) = (t^2/2)u(t)$ b) $P(t) = (t^2/2)$
 c) $P(t) = (t^2/2)\delta(t)$ d) $p(t) = n r(t)$
- 7) If $f(t) = f(-t)$ and $f(t)$ satisfy the dirichlets conditions, then $f(t)$ can be expended in a fourier series containing _____.
 a) Only sine terms
 b) Only cosine terms & constant term
 c) Cosine terms & constant term
 d) Sine terms & a constant term
- 8) The area under the curve $\int_{-\infty}^{+\infty} \delta(t)$ is
 a) Unity b) ∞
 c) 0 d) Undefined

- B) State true or false:** 06
- 1) The sinusoidal and complex exponential signals are always aperiodic.
 - 2) On LTI system is stable only if the integral of its impulse response is finite.
 - 3) The sinc signal is non-periodic.
 - 4) A signal which cannot be described by any mathematical expression is called random signal.
 - 5) The symbol \ is used for right division.
 - 6) A continuous time signal $x(t)$ is said to be even if it is identified with reflection about $t = 0$.

- Q.2 A) Attempt any two:** 10
- 1) Check whether the following system is liner or not $y(n) = x(n) \cos \omega_0 n$.
 - 2) Write a short note on dirchlet conditions.
 - 3) What do you mean by signal? Explain importance of signals and system.

B) Explain the various relational and logical operators used in MATLAB. 04

Q.3 A) Explain Fourier series Representation of periodic signals. Derive the expression for it. 08

B) Find the fourier series coefficients for the continuous time periodic signal. 06

$x(t) = 1.5 \dots\dots\dots$ for $0 \leq t \leq 1$
 $= -1.5 \dots\dots\dots$ for $1 \leq t \leq 2$

With fundamental frequency $\omega_0 = \pi$

Q.4 A) Fine even and odd part of continuous time signal $x(t)$ shown in figure 1. 08

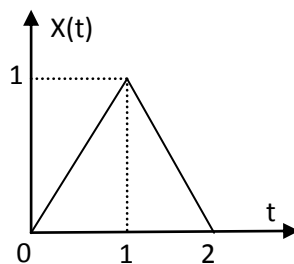


Figure 1

B) Write a note amplitude and phase spectrum of fourier series. 06

Q.5 A) Prove that LTI system is stable if its impulse response is absolutely summable. 08

B) Sketch a discrete time signal $x(n) = 3^{-n}$ for $-2 \leq n \leq 2$ and obtain. 06

- i. $Y_1(n) = 2x(n) + d(n - 1)$
- ii. $Y_2(n) = x(n/2) \cdot u(2 - n)$

Q.6 A) Obtain the expression for convolution of unit step sequence with finite duration sequence. 08

B) Determine the even & odd components of $x(t) = \cos t + \sin(t)$. 06

Q.7 A) Obtain liner convolution of given sequence $x(n) = \{1, 1, 1, 1\}$ and $h(n) = \{1, 1, 1, 1\}$. 08

B) Check whether the following system is 06

- i. Static/dynamic
- ii. Linear/non-linear
- iii. Time variant /time invariant

A modulator whose carrier frequency is ω_0 giving an output $y(t) = x(t) \cos \omega_0 t$

Seat No.	
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M.Sc. (Semester - II) (CBCS) Examination Oct/Nov-2017

Botany

ADVANCES IN PLANT PATHOLOGY

Day & Date: Monday, 27-11-2017

Max. Marks: 70

Time: 10.30 AM to 01.00 PM

- Instructions:** 1) Attempt in all five questions.
 2) Q.1 is compulsory.
 3) Attempt any two from Q. No. 2, to 4.
 4) Attempt any two from Q. No. 5, to 7.
 5) Figures to the right indicate full marks.

Q.1 Choose the correct answer from the given alternatives.

14

- 1) Plant pathology is that branch of agricultural, _____ science.
 - a) Botanical
 - b) Geological
 - c) Both a and b
 - d) None of these
- 2) In India alone crop diseases are destroying food grains and other products to the tune of _____.
 - a) Rs. 6000
 - b) Rs. 5000
 - c) Rs. 4000
 - d) Rs. 3000
- 3) The term _____ is derived from a Greek word meaning 'among the people'.
 - a) Endemic
 - b) Sporadic
 - c) Epidemic
 - d) Both a and c
- 4) Shrum in _____ worked on forecasting of epidemics.
 - a) 1978
 - b) 1979
 - c) 1980
 - d) 1981
- 5) The event of pathogenesis will be discussed under the heads _____.
 - a) Prepenetration
 - b) Penetration
 - c) Postpenetration
 - d) All of these
- 6) The histology of defense in plants has been reviewed by Akai in _____.
 - a) 1959
 - b) 1969
 - c) 1979
 - d) 1989
- 7) TMV is the example of _____ disease.
 - a) Viral
 - b) Fungal
 - c) Bacterial
 - d) Mycoplasma
- 8) Prior in _____ the causal agent of little leaf of eggplant was considered a virus.
 - a) 1988
 - b) 1998
 - c) 1968
 - d) 1978
- 9) Citrus canker disease caused by _____ *citri*.
 - a) *Ustilago*
 - b) *Sphacelotheca*
 - c) *Cercospora*
 - d) *Xanthomonas*

10) Root knot of vegetables is the example of _____ disease.

- a) Fungal
- b) Viral
- c) Nematodes
- d) All of these

11) Red rust is the example of _____ disease.

- a) Algal
- b) Fungal
- c) Viral
- d) Mycoplasma

12) Ergot is the example of _____ disease.

- a) Fungal
- b) Viral
- c) Bacterial
- d) Nematodes

13) White rust is the example of _____ disease.

- a) Mycoplasma
- b) Viral
- c) Fungal
- d) Bacterial

14) Root parasites is the example of _____ disease.

- a) Phenerogamic
- b) Viral
- c) Fungal
- d) Bacterial

- Q.2** a) Describe the smut disease studied by you. **07**
 b) Give the classification of plant diseases based on symptoms. **07**
- Q.3** a) Explain the slow and rapid epiphytotics studied by you. **07**
 b) Describe the symptoms, causal organism, disease cycle and control measures of GSD. **07**
- Q.4** a) Explain the eradication method of plant disease control. **07**
 b) Give the general character and identification techniques of MLO. **07**
- Q.5** a) Explain the symptoms, causal organism and control measures of ergot disease. **05**
 b) Describe the symptoms, causal organism and control measures of leaf spot bacterial disease. **05**
 c) Write a note on exclusion studied by you. **04**
- Q.6** a) Describe the method of diagnosis of plant diseases. **05**
 b) Give note on role of environmental factors on disease development. **05**
 c) Explain the colonization studied by you. **04**
- Q.7** **Write notes on any three.** **14**
 a) Disease forecasting
 b) Penetration
 c) Genetic resistance
 d) Importance of plant diseases

Seat No.	
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Set	P
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M.Sc. (Semester - II) (CBCS) Examination Oct/Nov-2017
Agrochemicals And Pest Management
BIOTECHNOLOGICAL ASPECTS IN PLANT PROTECTION – I

Day & Date: Monday, 27-11-2017
 Time: 10.30 AM to 01.00 PM

Max. Marks: 70

- Instructions:** 1) All questions are compulsory.
 2) Attempt any two questions from section – II and III.
 3) Figure to right indicate full marks.
 4) All questions carry equal marks.

Section – I

Objective type:

- N. B.:** I) Correct answer to each items carries one mark.
 II) There are in all 14 items for 14 marks.

- 1) Sugarcane is suitable for cultivation in _____ soil.
 - a) Medium to heavy black
 - b) Alluvial
 - c) Sandy loam or loam
 - d) Light or sandy loam
- 2) Fungus causes Red rot disease on sugarcane.
 - a) *Colletotrichum*
 - b) *Alternaria*
 - c) *Fusarium*
 - d) *Puccinia*
- 3) Cabbage belong to the _____ Family.
 - a) Papavaraceae
 - b) Capparidaceae
 - c) Brassicaceae
 - d) Fumariaceae
- 4) Sugarcane belongs to them _____ Family.
 - a) Malvaceae
 - b) Capparidaceae
 - c) Brassicaceae
 - d) Poaceae
- 5) Botanical name of wheat _____.
 - a) *Triticum aestivum* Linn
 - b) *Hordeum vulgare* Linn
 - c) *Oryza sativa* Linn
 - d) *Sorghum vulgare* (L.) Moench
- 6) Shoot initiating hormone in tissue culture is _____.
 - a) Gibberllins
 - b) Ethylene
 - c) Auxin
 - d) Cytokinens
- 7) _____ culture is used for to produce virus free pants.
 - a) Anther culture
 - b) Ovary culture
 - c) Meristem culture
 - d) Root culture
- 8) Indirect method of gene transfer used for transfer of _____ bacteria.
 - a) Air born
 - b) Soil born
 - c) Both
 - d) None of these
- 9) A cross between two in breads is called as _____.
 - a) Single cross
 - b) Double cross
 - c) Back cross
 - d) Multiple cross

- 10) Vertical resistance is govern by _____.
a) Polygene b) Oligogene
c) Multigene d) All of above
- 11) The plant tissue culture technique is first introduced by _____.
a) Habertlant b) Bonner
c) Hanning d) Gautheret
- 12) Structure involved in genetic engineering is _____.
a) Codon b) Scissors
c) Plastids d) Plasmid
- 13) PCR technique was developed by _____.
a) Herbert Boyer b) Stanley Cohen
c) K. Mullis d) Twor and d'Herelle
- 14) Bt gene is developed in cotton for control of bollworm the bacteria is _____.
a) Soil born b) Air born
c) Both d) None of these

Section – II

- N. B.:** I) Answer any two questions.
II) Each question carries 14 marks.

- | | | |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| Q.2 | A) Describe cultivation of Tur crop with respect to soil and Climate, seed rate and sowing, fertilizer and plant protection measure. | 07 |
| | B) Describe cultivation of Groundnut crop with respect to soil and seed rate and sowing, fertilizer and plant protection measure. | 07 |
| Q.3 | A) Seed Legislation | 07 |
| | B) Seed technique of producing hybrid seeds for disease resistance. | 07 |
| Q.4 | A) Describe in detail horizontal and vertical resistance of plants. | 07 |
| | B) Explain in brief back cross method and escape of breeding. | 07 |

Section – III

- | | | |
|------------|--------------------------------------------------------------------|-----------|
| Q.5 | A) Meristem culture for virus free stock | 05 |
| | B) Anther culture | 05 |
| | C) Organogenesis | 04 |
| Q.6 | A) Introduction of BT gene. | 05 |
| | B) Genetic Engineering | 05 |
| | C) Transgenic plants | 04 |
| Q.7 | A) Cultivation and requirements of fertilizer of Sugarcane. | 05 |
| | B) Plant protection measure of Onion. | 05 |
| | C) Agro bacterium mediated gene transfer | 04 |

Seat
No.Set **P**

M.Sc. (Semester - II) (CBCS) Examination Oct/Nov-2017
Geography
REGIONAL GEOGRAPHY OF INDIA

Day & Date: Monday, 27-11-2017
Time: 10.30 AM to 01.00 PM

Max. Marks: 70

- Instructions:** 1) All questions are compulsory.
2) All questions Carry equal marks
3) Use of stencils is allowed.
4) Draw neat diagrams wherever necessary.

Q.1 A) Choose the correct alternative given in the bracket.

07

- 1) The portion of the Himalayas lying in Himachal Pradesh is known as _____.
a) Himachal Himalayas b) Punjab Himalaya
c) Western Himalaya d) Kumaun Himalaya
- 2) In India Mangrove is the most important tree of _____.
a) Tropical moist deciduous forest
b) Tidal forests
c) Tropical dry deciduous forest
d) Sub -Tropical moist forest
- 3) Headquarters of Bharat coking coal Limited (BCCL) are in _____.
a) Kerala b) Uttar Pradesh
c) Tamil Nadu d) Dhanbad
- 4) _____ river is called as lifeline of Kerala.
a) Periyar b) Pamba
c) Chaliyar d) Kabini
- 5) _____ groups of states has the largest deposits of iron ore.
a) Bihar and Orissa
b) West Bengal and Assam
c) Madhya Pradesh & Maharashtra
d) Karnataka & Andhara Pradesh
- 6) The most important source of irrigating in the north part of Indian Great Desert (Thar) is _____.
a) Canal b) Well
c) Tube Well d) All of the above
- 7) _____ factor is responsible for the rapid growth of sugar production in South India compared to North India.
a) Per hectare yield of sugarcane
b) Transportation
c) Lower labour cost
d) Longer crushing period

B) Fill in the blanks:

07

- 1) Kulu and Kangra valleys are located in the state of _____.
- 2) Maximum production of bauxite in India comes from _____.
- 3) The Himalaya snow fields cover about _____ sq. km. from Kashmir to Assam.
- 4) The Gangasagar dam is constructed on _____ river.
- 5) _____ national park is situated in the Jharkhand.
- 6) Kanchenjunga peak is situated in _____ state.
- 7) _____ District of Maharashtra is associated with largest suger industries.

Q.2 Write any four physiographic divisions of India. **14**

Q.3 Describe in detail the classification of soil in India. **14**

OR

Describe the distribution of Iron and Steel industries in India.

Q.4 Write short answers for the following questions. (any two) **14**

- a) Give an account of Wheat on production of India.
- b) Write a geographical essay on Jharkhand State.
- c) Give an account of canals irrigation in India.
- d) Discuss the cotton textile industry in India.

Q.5 Write short notes. (any two) **14**

- a) The Gangetic plain region
- b) Location of India
- c) The concept of micro region
- d) Describe the production and distribution of coal in India.

प्र.5 थोडक्यात उत्तरे लिहा (कोणतेही दोन)

1. गंगेचा मैदानी प्रदेश
2. भारताचे स्थान
3. सूक्ष्म प्रदेश संकल्पना
4. भारतातील दगडी कोळशाचे वितरण आणि उत्पादन वर्णन करा.

Seat No.	
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**M.A. (Semester - II) (CBCS) Examination Oct/Nov-2017
Economics (Campus)
INDIAN ECONOMY**

Day & Date: Monday, 27-11-2017
Time: 10.30 AM to 01.00 PM

Max. Marks: 70

Instructions: 1) All questions are compulsory.
2) Figure to right indicate full marks.

Q.1 Multiple choice questions: 14

- 1) RRB is _____.
 - a) Rural Regional Bank
 - b) Regional Rural Bank
 - c) Rehabilitation Rural bank
 - d) None of these
- 2) _____ is the chairman of planning commission India.
 - a) Home Minister
 - b) Chief Minister
 - c) Defence Minister
 - d) Prime Minister
- 3) Small Scale industries are those which have the investment limit up to _____.
 - a) 1 Crore
 - b) 2 Crore
 - c) 15 Crore
 - d) 3 Crore
- 4) _____ was the first five year plan period.
 - a) 1951-1956
 - b) 1960-65
 - c) 1956-1960
 - d) 1951-1958
- 5) Non-institutional finance sources are _____.
 - a) Money lender
 - b) Traders
 - c) Relatives
 - d) All the above
- 6) _____ is the Apex Bank for rural credit.
 - a) RBI
 - b) RRB
 - c) NABARD
 - d) SCB
- 7) The rate at which Reserve Bank of India lends credit to the banks is known as _____.
 - a) Bank rate
 - b) Credit rate
 - c) Cash rate
 - d) CRR

Q.2 Write short notes. (any 4 out of 5) 14

- a) Agricultural Price Policy
- b) Planning in India
- c) Capital Market
- d) Small Scale Industries
- e) Privatization

Q.3 Write short answers. (any 2 out of 3) 14

- a) What are the measures undertaken to improve the agricultural marketing in India?
- b) Explain the strategy of first and second Five Year Plan.
- c) Explain the objectives of Economic Planning of India.

- Q.4 Descriptive type questions** **14**
- a) Evaluate the 'Public Distribution System' in India.
 - b) Discuss the various Sources of finance of central and state Government and also explain of expenditure of central and state government.
- Q.5** Explain the Role of NABARD in agriculture and Rural Development. **14**

Seat No.	
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M.A. (Semester - II) (CBCS) Examination Oct/Nov-2017
History And Archaeology
INDIAN TOURISM

Day & Date: Monday, 27-11-2017
 Time: 10.30 AM to 01.00 PM

Max. Marks: 70

Instructions: 1) All questions are compulsory.
 2) Figure to right indicate full marks.

- Q.1 Select appropriate word: 14**
- 1) _____ is the second visited monument in India.
 - a) Ajanta Caves
 - b) Sun Temple
 - c) Badami Caves
 - d) Durga Temple
 - 2) The famous Kandariya Mahadeo Temple is situated at _____.
 - a) Bhopal
 - b) Konark
 - c) Khajuraho
 - d) Sanchi
 - 3) _____ recognizes a monument of place as world heritage?
 - a) Indian Government
 - b) I.T.D.C
 - c) I.M.F
 - d) UNESCO
 - 4) Kailash temple is the attraction of tourist at _____.
 - a) Pitalkhore
 - b) Ellora Caves
 - c) Ajanta Caves
 - d) Elephant Caves
 - 5) Foreign travellers are welcomed in the country for _____.
 - a) For foreign exchange
 - b) Development of tourism
 - c) Spread of religion
 - d) Cultural Exchange
 - 6) The Durga temple is located at _____ state.
 - a) West Bengal
 - b) Karnataka
 - c) Andhra Pradesh
 - d) Maharashtra
 - 7) The headquarter of ICAO is at _____.
 - a) Italy
 - b) Paris
 - c) Montreal
 - d) New York
- Q.2 Write short notes of the following: (any four out of five) 14**
- a) Sport Tourism
 - b) Elephanta Caves
 - c) Religious Tourism
 - d) Definitions & purpose of tourism
 - e) WTO
- Q.3 Write a short answers of the following: (any two out of three) 14**
- a) Discuss the importance of Tanjore Museum.
 - b) Write a note on contribution of good tourist guide.
 - c) Explain the features of Durga Temple & Aihole Museum.
- Q.4 Answer any one of the following: 14**
- Describe the work of different tourist agencies in detail.
- OR**
- Discuss the Shiv temple of Ambarnath as the place of tourist interest.
- Q.5 Write in detail the rock-cut architectural features & importance of Bhaje & karle caves as tourist point of view. 14**

Seat No.	
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M.A. (Semester - II) (CBCS) Examination Oct/Nov-2017
Rural Development
SOCIAL MARKETING

Day & Date: Monday, 27-11-2017
 Time: 10.30 AM to 01.00 PM

Max. Marks: 70

Instructions: 1) All questions are compulsory.
 2) Figure to right indicate full marks.

Q.1 Multiple choice questions:

14

- 1) What is long form STP
 - a) Segmentation, target audience, Positioning
 - b) Segmentation, target audience, Processing
 - c) Segmentation, tentative audience, Positioning
 - d) Sequence, Target audience, Positioning
- 2) Which of the following does not include 4 Cs of social marketing?
 - a) Cause
 - b) Channel
 - c) Communication
 - d) Customer
- 3) Giving education for social cause is a _____ goal.
 - a) Long term
 - b) Short cut
 - c) Short term
 - d) Social
- 4) Which of the following is not a criteria for segmenting social markets?
 - a) Demographics
 - b) Psychographics
 - c) Order size
 - d) Geographic
- 5) The long form of NGO's is _____.
 - a) None-Granted Organizations
 - b) Non-Grouped Organizations
 - c) Non-Governmental Organizations
 - d) None of these
- 6) Social marketing is primarily concerned with _____.
 - a) Changing culture
 - b) Changing the status
 - c) Motivating volunteers
 - d) Influencing behavior
- 7) News letter, advertising, catalogues, invitations are most closely associated with _____.
 - a) Pricing
 - b) Distribution
 - c) Product development
 - d) Promotion

Q.2 Write short notes (any 4 out of 5)

14

- a) Positioning
- b) SWOT analysis
- c) Planning
- d) 4 Ps
- e) Target Audience

- Q.3 Short answer type questions(any 2 out of 3) 14**
- a) Explain any one state program of social marketing.
 - b) Explain opportunity and Threat in SWOT analysis.
 - c) Comment on agencies of social marketing
- Q.4 Descriptive type questions with internal choice 14**
- a) What is Marketing Mix?
 - b) How education plays an important role in social marketing?
- Q.5 Descriptive type questions: 14**
- What is meant by “Globalization?” and explain the impact of globalization on social marketing.

Seat No.	
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M.A. (Semester - II) (CBCS) Examination Oct/Nov-2017
Rural Development
WRITING COMMUNICATION SKILL AND CURRENT AFFAIRS

Day & Date: Monday, 27-11-2017
 Time: 10.30 AM to 01.00 PM

Max. Marks: 70

Instructions: 1) All questions are compulsory.
 2) Figures to the right indicate full marks.

Q.1 Multiple Choice Questions: (2 Marks Each) 14

- 1) _____ is the component of the communication process.
 - a) Sender
 - b) Receiver
 - c) Medium
 - d) All of these
- 2) _____ is the type of word.
 - a) Noun
 - b) Adjective
 - c) Adverb
 - d) All of these
- 3) _____ is a type of stress.
 - a) Acute
 - b) Chronic
 - c) Both a) and b)
 - d) None of these
- 4) Internet Started in year _____.
 - a) Year 1951
 - b) Year 1970
 - c) Year 1980
 - d) None of these
- 5) _____ is the sources in communication process.
 - a) Book
 - b) Report
 - c) Both (a) and (b)
 - d) None of these
- 6) CV includes _____.
 - a) Nationality
 - b) Gender
 - c) Professional Qualification
 - d) All of these
- 7) E-mail includes _____.
 - a) Subject
 - b) Attachments
 - c) Both a) and b)
 - d) None of these

Q.2 Write short notes. (any four) 14

- a) Positive Speaking
- b) Communication
- c) Internet as medium of reference
- d) Over Confidence
- e) Feedback

Q.3 Short Answer Type Questions. (any two) 14

- a) Write about Power Point Presentation?
- b) Discuss on the topic 'barriers to communication.'
- c) What is time management?

- Q.4 Descriptive Type Questions with internal choice:** **14**
- a) What is the translation and state its importance?
- OR**
- b) What are the types of Interview?
- Q.5** Write an essay on topic 'Environment Protection and Conservation' **14**

(मराठी रूपांतर)

- सूचना: 1) सर्व प्रश्न अनिवार्य आहेत.
2) उजवीकडील अंक गुण दर्शवतात.

प्र.1	योग्य पर्याय निवडा व उत्तरे लिहा:	14
1.	---- हे संवाद प्रक्रियेतील घटक आहे. अ) प्रेषक क) माध्यम	ब) ग्राहक ड) यापैकी सर्व
2.	---- हे शब्दाचा प्रकार आहे. अ) नाम क) क्रिया विशेषण	ब) विशेषण ड) यापैकी सर्व
3.	---- हे ताण-तणावाचा प्रकार आहे. अ) तीव्र क) दोन्ही a) आणि b)	ब) जुनाट ड) यापैकी नाही
4.	इंटरनेट ---- यावर्षी सुरू झाले. अ) 1951 वर्षी क) 1980 वर्षी	ब) 1970 वर्षी ड) यापैकी नाही
5.	---- हे संवाद प्रक्रियेतील स्रोत आहे. अ) पुस्तक क) दोन्ही a) आणि b)	ब) अहवाल क) यापैकी नाही
6.	सी.व्ही. मध्ये ---- चा समावेश होतो. अ) राष्ट्रीयत्व क) व्यावसायिक पात्रता	ब) लिंग ड) यापैकी सर्व
7.	E-mail मध्ये ---- समावेश होतो. अ) विषय क) दोन्ही a) आणि b)	ब) संलग्नक ड) यापैकी नाही
प्र.2	टिपा लिहा. (कोणत्याही चार)	14
1.	सकारात्मक बोलणे	
2.	संवाद	
3.	इंटरनेट संदर्भाचे माध्यम	
4.	अति आत्मविश्वास	
5.	प्रतिक्रिया	
प्र.3	लघुत्तरी प्रश्न. (कोणतेही दोन)	14
1.	पॉवर पॉइंट प्रेझेंटेशन या विषयी लिहा.	
2.	संवादातील अडथळे या विषयावरती चर्चा करा.	
3.	वेळेचे व्यवस्थापन म्हणजे काय?	
प्र.4	दिर्घोत्तरी प्रश्न अंतर्गत पर्यायासह. (कोणतेही एक)	14
1.	भाषांतर म्हणजे काय आणि त्याचे महत्व स्पष्ट करा. अथवा	
2.	मुलाखतीचे प्रकार कोणते आहेत?	
प्र.5	'पर्यावरण संरक्षण आणि संवर्धन' या विषयावर निबंध लिहा.	14

Seat No.	
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M.A. (Semester - II) (CBCS) Examination Oct/Nov-2017
Mass Communication
WRITING AND COMMUNICATION SKILLS

Day & Date: Monday, 27-11-2017
 Time: 10.30 AM to 01.00 PM

Max. Marks: 70

Instructions: 1) All questions are compulsory.
 2) Figures to the right indicate full marks.

Q.1 Multiple Choice Questions: (2 Marks Each) 14

- 1) _____ is the component of the communication process.
 - a) Sender
 - b) Receiver
 - c) Medium
 - d) All of these
- 2) _____ is the type of word.
 - a) Noun
 - b) Adjective
 - c) Adverb
 - d) All of these
- 3) _____ is a type of stress.
 - a) Acute
 - b) Chronic
 - c) Both a) and b)
 - d) None of these
- 4) Internet Started in year _____.
 - a) Year 1951
 - b) Year 1970
 - c) Year 1980
 - d) None of these
- 5) _____ is the sources in communication process.
 - a) Book
 - b) Report
 - c) Both (a) and (b)
 - d) None of these
- 6) CV includes _____.
 - a) Nationality
 - b) Gender
 - c) Professional Qualification
 - d) All of these
- 7) E-mail includes _____.
 - a) Subject
 - b) Attachments
 - c) Both a) and b)
 - d) None of these

Q.2 Write short notes. (any four) 14

- a) Positive Speaking
- b) Communication
- c) Internet as medium of reference
- d) Over Confidence
- e) Feedback

Q.3 Short Answer Type Questions. (any two) 14

- a) Write about Power Point Presentation?
- b) Discuss on the topic 'barriers to communication.'
- c) What is time management?

- Q.4 Descriptive Type Questions with internal choice:** **14**
- a) What is the translation and state its importance?
- OR**
- b) What are the types of Interview?
- Q.5** Write an essay on topic 'Environment Protection and Conservation' **14**

(मराठी रूपांतर)

- सूचना: 1) सर्व प्रश्न अनिवार्य आहेत.
2) उजवीकडील अंक गुण दर्शवतात.

प्र.1	योग्य पर्याय निवडा व उत्तरे लिहा:	14
	1. — हे संवाद प्रक्रियेतील घटक आहे. अ) प्रेषक क) माध्यम	ब) ग्राहक ड) यापैकी सर्व
	2. — हे शब्दाचा प्रकार आहे. अ) नाम क) क्रिया विशेषण	ब) विशेषण ड) यापैकी सर्व
	3. — हे ताण-तणावाचा प्रकार आहे. अ) तीव्र क) दोन्ही a) आणि b)	ब) जुनाट ड) यापैकी नाही
	4. इंटरनेट — यावर्षी सुरु झाले. अ) 1951 वर्षी क) 1980 वर्षी	ब) 1970 वर्षी ड) यापैकी नाही
	5. — हे संवाद प्रक्रियेतील स्रोत आहे. अ) पुस्तक क) दोन्ही a) आणि b)	ब) अहवाल क) यापैकी नाही
	6. सी.व्ही. मध्ये — चा समावेश होतो. अ) राष्ट्रीयत्व क) व्यावसायिक पात्रता	ब) लिंग ड) यापैकी सर्व
	7. E-mail मध्ये — समावेश होतो. अ) विषय क) दोन्ही a) आणि b)	ब) संलग्नक ड) यापैकी नाही
प्र.2	टिपा लिहा. (कोणत्याही चार)	14
	1. सकारात्मक बोलणे 2. संवाद 3. इंटरनेट संदर्भाचे माध्यम 4. अति आत्मविश्वास 5. प्रतिक्रिया	
प्र.3	लघुत्तरी प्रश्न. (कोणतेही दोन)	14
	1. पॉवर पॉइंट प्रेझेंटेशन या विषयी लिहा. 2. संवादातील अडथळे या विषयावरती चर्चा करा. 3. वेळेचे व्यवस्थापन म्हणजे काय?	
प्र.4	दिर्घोत्तरी प्रश्न अंतर्गत पर्यायासह. (कोणतेही एक)	14
	1. भाषांतर म्हणजे काय आणि त्याचे महत्व स्पष्ट करा. अथवा 2. मुलाखतीचे प्रकार कोणते आहेत?	
प्र.5	'पर्यावरण संरक्षण आणि संवर्धन' या विषयावर निबंध लिहा.	14