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B.PHARM.

**(I SEMESTER) EXAMINATION
REMEDIAL BIOLOGY**

Time : 3 Hours]

[Max. Marks : 70

Note: Attempt all questions. Each question carry equal marks.

Q.1. Attempt All the parts. Choose one correct option. [1×14=14]

- (i) Amoebic dysentery is caused by
(a) Tape worm (b) Hookworm
(c) E. histolytica (d) Pinworm
- (ii) The scientific name of silkworm is
(a) Musca domestica (b) Callasobruhhus
(c) Bombyx mori (d) None
- (iii) Hexacanth is the larval stage of
(a) Round worm (b) Tape worm
(c) Both (a) and (b) (d) None of the above
- (iv) Proglottid is-
(a) Head of Taenia (b) Head of Ascaris
(c) Body segment of Taenia (d) Body segment of Ascaris
- (v) Purines of DNA are
(a) Cytosine and Guanine (b) Adenine & Guanine
(c) Adenine and cytosine (d) Uracil and Guanine
- (vi) Base pairs formed in one turn of DNA helix-
(a) 12 (b) 11
(c) 10 (d) 8
- (vii) Roots originate from-
(a) Radicle (b) Plumule
(c) Coteoptile (d) Stem

(viii) Arrangement of veins in the lamina of the leaf is called as

- (a) Placentation (b) Phyllotaxy
(c) Mitochondria (d) Inflorescence

(ix) Which is common in plant and animal cell?

- (a) Centriole (b) Central vacuole
(c) Venation (d) Plastids

(x) Which one of the following is not present in DNA?

- (a) Adenine (b) Guanine
(c) Cytosine (d) Uracil

(xi) Visual unit of compound eye is called as-

- (a) Ommatidia (b) Ocelli
(c) Receptor (d) Photoreceptor

(xii) Arrangement of leaves on the branches is called as-

- (a) Inflorescence (b) Placentation
(c) Phyllotaxy (d) Venation

(xiii) Prop root is a type of root modification for the purpose of

- (a) Mechanical support (b) Storage of food
(c) Both (a) and (b) (d) None

(xiv) The vector of Trypanosoma is

- (a) Mosquito (b) Housefly
(c) Tse-tse fly (d) Nematode

Q.2. Write a short note on any four from the following :

[3.5×4=14]

- (i) General character of phylum protozoa.
(ii) Morphology of Entamoeba histolytica
(iii) Structure of Trypanosoma
(iv) Morphology of Flower
(v) Mitochondria

Q.3. Attempt any two of the following :

[7×2=14]

- (i) Give the diagrammatic representation of life cycle of Taenia solium.
(ii) What is inflorescence? Describe racemose inflorescence in detail.
(iii) Describe underground modification of stem.

Q.4. Attempt any two of the following

[7×2=14]

- (i) Give an account of lifecycle of silkworm.
(ii) Describe the structure of Ascaris lumbricoides
(iii) Write short notes on DNA.

Q.5. Attempt any one of the following

[14×1=14]

- (i) What is cell cycle? Describe different steps of mitosis with the help of a neat diagram.
(ii) Give an account of life cycle of Malarial Parasite with the help of a neat Labelled diagram

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B.PHARM.
(I SEMESTER) EXAMINATION
MATHEMATICS

Time : 3 Hours]

[Max. Marks : 70

Note: Attempt all questions. Each question carry equal marks.

Q.1. Attempt All the parts. Choose one correct option. [1×14=14]

- (a) If the outcome of one event does not influence another event then the two events are
(i) Dependent (ii) Independent
(iii) Mutually exclusive (iv) None of these
- (b) Rank correlation coefficient was given by-
(i) Karl Pearson (ii) Fisher
(iii) Bowley (iv) Spearman
- (c) The sum of the deviations of the observation from the mean is equal to -
(i) 0 (ii) 1
(iii) 2 (iv) None of these
- (d) Probability of Event E is $P(E) = \underline{\hspace{2cm}}$
- (e) An event which never happens i.e, no outcome favours to this event is called $\underline{\hspace{2cm}}$
- (f) If the two variates x and y are independents then the angle between the two lines of regression is;
(i) 0 (ii) $\frac{\pi}{3}$ (iii) $\frac{\pi}{2}$ (iv) π
- (g) Standard error of mean is:
(i) $\frac{\sigma}{\sqrt{n}}$ (ii) $\frac{\sigma}{\sqrt{2n}}$
(iii) $1.3626 \times \frac{\sigma}{\sqrt{n}}$ (iv) None of these

(h) What is the order of $\left(\frac{d^3y}{dx^3}\right)^2 - xy\left(\frac{dy}{dx}\right) + y = 0$ is?

- (i) 3 (ii) 2
(iii) 4 (iv) 1

(j) If independent events are A & B then $P(A \cup B) =$ _____

(j) If $P(X=0)=P(X=1)=k$ in a poisson distribution then k is equal to

- (i) $\frac{1}{e}$ (ii) $\frac{1}{e^2}$
(iii) $\frac{1}{e^3}$ (iv) None of these

(k) The probability distribution $P(x) = n_c p^x q^{n-x}$ belongs to Binomial distributioun. (True/False)

(l) Normal distribution is a limiting case of Binomial distribution (True/False)

(m) Father of Statistics is-

- (i) Marshall (ii) Galton
(iii) R.A Fisher (iv) Gottfried Achen wall

(n) The value of r statistics:

- (a) $-i < r < 1$ (ii) $-i < \frac{1}{r} < 1$
(iii) $0 \leq r \leq 1$ (iv) $-1 \leq r \leq 1$

Q.2. Write a short note on any four from the following :

[3.5×4=14]

(a) Compute mode for distribution-

size	6-10	11-15	16-20	21-25	26-30
frequency	20	30	50	40	10

(b) Calculate the first four moments about mean for the following frequency distribution.

Mark	0-10	10-20	20-30	30-40	40-50
No of student	5	10	40	20	25

(c) What is regression analysis and explain curve of regression, linear regression and lines of regression.

(d) From a bag containing 10 black and 5 white balls. Two balls are drawn at random what is the probability of getting-

- (i) both the white balls
(ii) one white and one black ball

(e) Solve $(D^3 - 4D^2 + 5D - 2)y = 0$

Q.3. Attempt any Four of the following :

[7×4=28]

(a) Find standard deviation from the data:

size	5-10	10-15	15-20	20-25	25-30	30-35	35-40
Frequency	5	8	12	17	12	8	5

(b) Find the Probability that a leap year selected at random will contain 53 Sundays.

(c) Define mean, mode, median and standard Deviation.

(d) Solve $\frac{d^2y}{dx^2} + \frac{4dy}{dx} + 4y = 0$

(e) Calculate A.M form the data:

Classes	20-30	30-40	40-50	50-60	60-70	70-80
F	25	35	80	90	60	20

Q.4. Attempt any one of the following

[14×1=14]

(a) Calculate Karl Pearson's coefficient of correlation from the following data-

X	15	25	35	45	55	65	75	85	95	105
Y	100	90	80	70	60	50	40	30	20	10

(b) Solve: $\left(\frac{d^2y}{dx^2}\right) - 5\left(\frac{dy}{dx}\right) + 6y = e^{4x}$

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B.PHARM.

(1st YEAR, I SEMESTER) EXAMINATION

PHARMACEUTICS-I(General Pharmacy)

Time : 3 Hours]

[Max. Marks : 70

Note: Attempt all questions. Each question carry equal marks.

Q.1. Attempt All the parts. Choose one correct option. [1×14=14]

(i) First Edition of I.P was published in year.

- | | |
|----------|----------|
| (a) 1954 | (b) 1955 |
| (c) 1945 | (d) all |

(ii) Ball mill work on the Purpose

- | | |
|----------------------|------------|
| (a) Impact | (b) Compat |
| (c) Impact & allulia | (d) All |

(iii) Kick's law:-

- | | |
|---------------------------|------------------------|
| (a) $E = ck \log D_1/D_2$ | (b) $E = \log D_1/D_2$ |
| (c) $E = ck D_1/D_2$ | (d) None |

(iv) Calamine lotion is

- | | |
|----------------|-----------|
| (a) Semi solid | (b) Solud |
| (c) Both | (d) None |

(v) Young rule based on

- | | |
|------------|----------|
| (a) Age | (b) Sex |
| (c) Height | (d) None |

(vi) SLS has HLB

- | | |
|---------|--------|
| (a) 40 | (b) 60 |
| (c) 100 | (d) 20 |

(vii) ____ Type of B/w color

- (a) Indigo Carmine
- (b) Yellow
- (c) Amarnath
- (d) All

(viii) ____ used as Preservative

- (a) Methyl paraben
- (b) Propyl Paraben
- (c) Salicylic acid
- (d) all

(ix) Extration is carw act by

- (a) boiling
- (b) sedimantion
- (c) Both
- (d) None

(x) 10/44 represent.

- (a) corse powder
- (b) Fine powder
- (c) Both
- (d) None

(xi) $Q < 20^\circ$ represent

- (a) Best flow
- (b) Poor flow
- (c) Both
- (d) None

(xii) Zinc oxide is used as-

- (a) Protective
- (b) Preservative
- (c) all
- (d) None

(xiii) 80% Represent

- (a) 8ml/10ml
- (b) 20ml/200ml
- (c) Both
- (d) None

(xiv) First B.P was published in

- (a) 1864
- (b) 1955
- (c) Both
- (d) None

Q.2. Attempt (any Four) of the following :

- (a) Preservative
- (b) coluring agent
- (c) Macration
- (d) Soil solid mixing
- (e) Cyclone Sperator

[3.5×4=14]

Q.3. Attempt any Two of the following :

[7×2=14]

- (a) Define extraction mention Differt method of extraction.
- (b) Calculate The dose of child to have age is 5 year and weight 25kg when of done is 500mg
- (c) Write note on Nauter mixture.

Q.4. Attempt any Two questions :

[7×2=14]

- (a) Explain Ball mill in detail
- (b) Explain classification of dosage form.
- (c) Define powder explain different type of powders.

Q.5. Answer the following :

[14×1=14]

- (a) Write in detail about History and development of Indian Pharamacopocia.

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B.PHARM.

**(1st YEAR, I SEMESTER) EXAMINATION
HUMAN ANATOMY & PHYSIOLOGY**

Time : 3 Hours]

[Max. Marks : 70

Note: Attempt all questions. Each question carry equal marks.

PART-A

Q.1. Attempt All the parts. Choose one correct option. [1×7=7]

- (i) Ligament connects.
 - (a) Bone to bone
 - (b) Bone to muscle
 - (c) Both
 - (d) None
- (ii) Blood is a Specialised form of-
 - (a) Epithelial tissue
 - (b) Muscular tissue
 - (c) Connective tissue
 - (d) None
- (iii) A long bone is covered by _____ at its proximal and distal epiphysis.
 - (a) Articular Cartilage
 - (b) Periosteum
 - (c) Endosteum
 - (d) None
- (iv) The addition of mineral and collagen fibers to bone by osteoblast is known as-
 - (a) Bone replacement
 - (b) Bone remodeling
 - (c) Bone displacement
 - (d) Bone deposition
- (v) Actin is.....type of skeletal fiber protein.
 - (a) Contractile
 - (b) Regulatory
 - (c) Structural
 - (d) None of these
- (vi) Nervous tissue is formed by.....primary germ layers.
 - (a) Endoderm
 - (b) Mesoderm
 - (c) Ectoderm
 - (d) All of these

(vii) Skeletal muscle fibers have-

- (a) One centrally located Nuclei (b) No nucless Nuclei
(c) Many Peripherally located Nuclei (d) None of these

Q.2. Attempt (anyTwo) of the following : [7×2=14]

- (i) Draw well labeled structure and write functions of mitochondria and ribosomes.
(ii) Describe the microscopic anatomy of skeletal muscle.
(iii) Give detailed account on apithelial tissue

Q.3. Attempt any One of the following : [14×1=14]

- (i) Describe the major feature of smooth, skeletal & cardiac muscle.
(ii) Write a detailed note on lymph node and spleen

PART-B

Q.4. Choose appropriate answer : [1×7=7]

- (i) Life span of RBC is about.....days.
(a) 250 (b) 120 (c) 90 (d) None of these
(ii) Platelets one involved in.....of blood.
(a) Blood Formation (b) Blood Purification
(c) Blood Coagulation (d) None of these
(iii) Production of energy (ATP) is major of these-
(a) Golgi Complex (b) Ribosomes
(c) Lysosomes (d) Mitochondria
(iv) People with.....type of blood group are known as universal recepint.
(a) A (b) B (c) AB (d) O
(v) Synasthrosis is-
(a) immovable joint (b) Slightly moveable joint
(c) Freely movable joint (d) None of these

(vi) Speed of Contraction in smooth muscle is-

- (a) Fast (b) Moderate
(c) Slow (d) None of these

(vii) The process that moves material from low to higher concentration and require energy is known as-

- (a) Osmosis (b) Diffusion
(c) Passive Transport (d) Active transport

Q.5. Write short note any two : [3.5×2=7]

- (i) Composition and functions of Blood.
(ii) Erythropeisis.
(iii) Concept of Prevention of Discase.

Q.6. Give a brief account on any one of following : [7×1=7]

- (i) Mechanism of blood coagulation
(ii) Vitamin deficiency disorder

Q.7. Attempt any one of the following: [14×1=14]

- (i) Describe fluid mosaic model
(ii) Define health and describe various dimensions of health. Also enlist the various indicators of health.

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