



## VINAYAKA MISSION'S RESEARCH FOUNDATION, SALEM

(Deemed to be University under section 3 of the UGC Act 1956)

### Anatomy (Medical)

#### Instructions / Note:

1. Answer all the questions. Each question carries one mark.
2. No negative marks for wrong answers.
3. Read each question carefully and answer in the OMR sheet provided for each question with only blue/ black pen to fill the circles in the OMR Sheet.
4. Return the question paper along with the OMR sheet.

Time: 90 Minutes

Venue: \_\_\_\_\_.

[35X1=35]

### Part - B

1. Which of the following hormone is secreted by Pars intermedia of pituitary gland?
  - A. Oxytocin
  - B. Melanocyte stimulating hormone
  - C. Antidiuretic hormone
  - D. Vasopressin
2. Which of the following structures consists of both projection & commissural fibres?
  - A. Internal capsule
  - B. Pyramid
  - C. Cerebral fornix
  - D. Crus cerebri
3. Which of the following cartilage completely encircle the laryngeal cavity
  - A. Thyroid cartilage
  - B. Cricoid
  - C. Arytenoid
  - D. Epiglottis
4. Which of the following is not a sutural bone?
  - A. Epipteric bone
  - B. Inca bone
  - C. Os kerckring
  - D. Interparietal bone
5. Passavant's ridge is formed by
  - A. Salphingopharygeus muscle
  - B. Stylopharygeus muscle
  - C. Palatopharygeus muscle
  - D. Thyropharygeus muscle



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6. Most abundant papillae on the dorsum of the tongue
  - A. Filiform
  - B. Fungiform
  - C. Circumvallate
  - D. Folate
7. The angle between the anterior surface of L5 vertebra and pelvic surface of S1 vertebra (lumbosacral angle) is:
  - A. 90°
  - B. 120°
  - C. 180°
  - D. 210°
8. Cremasteric reflex tests the integrity of spinal segments:
  - A. T11 and T12
  - B. L1 and L2
  - C. L3 and L4
  - D. S1 and S
9. The epiploic foramen (of Winslow) is not bounded by:
  - A. Caudate lobe of the liver superiorly
  - B. First part of the duodenum inferiorly
  - C. Portal vein posteriorly
  - D. Right free margin of the lesser omentum anteriorly
10. Meckel's diverticulum is due to persistence of:
  - A. Allantosis
  - B. Vitello-intestinal duct
  - C. Left umbilical vein
  - D. Ductus venosus
11. Commonest type of female pelvis is:
  - A. Platypelloid type
  - B. Gynecoid type
  - C. Android type
  - D. Anthropoid type
12. Talus provides attachment to:
  - A. Tibialis posterior
  - B. Tibialis anterior
  - C. Extensor digitorum brevis
  - D. None of the above



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13. The forward angulations between the long axes of vagina and cervix is called angle of:
- A. Antelexion
  - B. Anteversion
  - C. Retroflexion
  - D. Retroversion
14. In renal colic, the pain is referred from the loin to groin mainly through the spinal segments:
- A. T9-T12
  - B. T10-L1
  - C. T11-L2
  - D. T12-L3
15. Perichondrium is absent in
- A. Hyaline cartilage
  - B. Fibrocartilage
  - C. Elastic Cartilage
  - D. All of the above
16. What type of joint is at the base of the thumb?
- A. Saddle joint
  - B. Pivot joint
  - C. Ball and socket joint
  - D. Condylloid joint
17. Strongest ligament of the body
- A. Sacrospinous ligament
  - B. Sacrotuberous ligament
  - C. Ischiotuberous ligament
  - D. Iliofemoral ligament
18. Arterioles are the examples of
- A. Distributing vessels
  - B. Conducting vessels
  - C. Resistance vessels
  - D. Capacitance vessels
19. Myelin sheath around peripheral nerve fibre is formed by
- A. Oligodendrocytes
  - B. Schwann cells
  - C. Astrocytes
  - D. Microglia
20. Nerve supplying the muscles of sixth arch is
- A. External laryngeal
  - B. Internal laryngeal
  - C. Recurrent laryngeal
  - D. None of the above



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21. Bursa anserine(anserine bursa) is related to tendons of all of the following muscles except:
- A. Sartorius
  - B. Gracilis
  - C. Semitendinosus
  - D. Semimembranosus
22. Placenta develops from
- A. Decidua capsularis and chorion
  - B. Decidua capsularis and amnion
  - C. Decidua basalis and chorion
  - D. Decidua parietalis trophoblast
23. What type of joint is at the base of the thumb?
- A. Saddle joint
  - B. Pivot joint
  - C. Ball and socket joint
  - D. Condylloid joint
24. Subcapsular sinus is a characteristic feature of
- A. Spleen
  - B. Thymus
  - C. Lymph node
  - D. Palatine tonsil
25. The spiral valve of Heister is present in
- A. Hepatic duct
  - B. Cystic duct
  - C. Bile duct
  - D. Fundus of gall bladder
26. In the liver, Space of Disse is
- A. in the portal traid
  - B. around the central vein
  - C. perisinusoidal space
  - D. around portal traid
27. Gimbornat's ligament is
- A. Inguinal ligament
  - B. lacunar ligament
  - C. pectinate ligament of cooper
  - D. conjoint tendon



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28. The following is blood less fold of Treves
- A. median umbilical fold
  - B. mesentry
  - C. mesoappendix
  - D. iliocaecal fold
29. Transverse sinus of pericardium is
- A. Intervisceral space
  - B. parietovisceral sinus
  - C. cul de sac behind left atrium
  - D. below upper margin of left atrium
30. Payers patches are present in the mucus of
- A. Duodenum
  - B. Ileum
  - C. Jejunum
  - D. Vermiform appendix
31. Navicular fossa in male urethra is present in following part
- A. Pre-prostatic
  - B. Prostatic
  - C. Membranous
  - D. Spongy
32. Uncinate process of pancreas develops from
- A. Hepatic bud
  - B. Ventral pancreatic bud
  - C. Cystic bud
  - D. Dorsal pancreatic bud
33. Clinically most important synovial bursa around elbow joint
- A. Subtendinous olecranon bursa
  - B. Subcutaneous olecranon bursa
  - C. Bicipitoradial bursa
  - D. Bursa between biceps tendon & oblique cord
34. The muscle used for intramuscular injection in gluteal region is
- A. Gluteus maximus
  - B. Gluteus medius
  - C. Gluteus minimus
  - D. Tensor fascia lata
35. Axillary sheath is derived from
- A. Investing layer of deep cervical fascia
  - B. Pretracheal
  - C. Prevertebral
  - D. Deep fascia of axilla





**Physiology (Medical)**

**Part-B**

**[35x1=35]**

1. The activity of Na<sup>+</sup>K<sup>+</sup>ATPase is inhibited by
  - a) Insulin
  - b) Diacylglycerol
  - c) Ouabain
  - d) G actin
2. Dehydration developed rapidly and severely in infants and children is due to
  - a) Low ECF volume
  - b) Low ICF volume
  - c) Ratio of ECF to ICF volume is low
  - d) High RBC content in blood
3. Potential developed due to movement of freely diffusible ions across a semipermeable membrane is calculated using
  - a) Nernst equation
  - b) Gibbs equation
  - c) Goldman-Hodgkin-katz equation
  - d) Fick's principle
4. Most susceptible nerve fibre to hypoxia is
  - a) Type A
  - b) Type B
  - c) Type C
  - d) Type D
5. Example of neuromuscular inhibitor is
  - a) Methacholine
  - b) Carbachol
  - c) Succinylcholine
  - d) Disopropyl flurophosphate
6. Myotonia congenita is caused by
  - a) Abnormal calcium channel
  - b) Abnormal chloride channel
  - c) Abnormal potassium channel
  - d) Abnormal sodium channel
7. Megaloblastic anaemia is
  - a) Normocytic Normochromic
  - b) Macrocytic Normochromic
  - c) Macrocytic Hyperchromic
  - d) Macrocytic Hypochromic



8. A reliable screening test for platelet function is
- Clotting time
  - Prothrombin time
  - Thrombin time
  - Clot retraction time
9. Drug allergy is caused by
- Activated B Lymphocytes
  - IgG
  - Cytotoxic T cell
  - IgM
10. Elevated serum amylase is an indicator of
- Acute pancreatitis
  - Chronic pancreatitis
  - Liver dysfunction
  - Chronic Gastritis
11. Failure to absorb bile salt in the distal ileum causes
- Dysentery
  - Watery diarrhoea
  - Steatorrhea
  - Constipation
12. Iron absorption from GIT is increased by
- Phytic acid
  - Milk
  - Ascorbic acid
  - Hepcidin
13. Stokes Adams syndrome is loss of consciousness following
- Head injury
  - Complete heart block
  - Ventricular tachycardia
  - Ventricular fibrillation
14. CSF differs from plasma in having higher concentration of
- Sodium ions
  - Potassium ions
  - Chloride ions
  - Glucose
15. Left ventricular failure tends to cause
- No breathlessness in lying position
  - Decrease in ventricular end diastolic pressure
  - Paroxysmal nocturnal dyspnoea
  - Rise in lung compliance



16. The type of arterial pulse seen in shock
- Corrigan's pulse
  - Rapid thread pulse
  - Pulses paradoxes
  - Pulses alternans
17. Transection of mid pons with intact vagi leads to
- Rapid shallow breathing
  - Apneusis
  - Hyperventilation
  - Deep breathing
18. Haldane effect facilitates
- Release of  $\text{CO}_2$  in the lung
  - Transport of  $\text{O}_2$  by the blood
  - Release of  $\text{O}_2$  in the tissue
  - Shift of  $\text{O}_2$ -Hb curve to right
19. Vital capacity is decreased but timed vital capacity is normal in
- Bronchial asthma
  - Scoliosis
  - Chronic bronchitis
  - Respiratory muscle weakness
20. Glomerular capillary exhibit higher pressure than other body capillary bed because
- Afferent arterioles are major site of autoregulatory resistance
  - Efferent arterioles are relatively high resistances
  - There are two sets of capillary in the kidney
  - Filtration occurs at the glomeruli
21. Renal failure results in
- Acidosis
  - Alkalosis
  - Dehydration
  - Over hydration
22. Renal threshold for glucose is
- 250mg
  - 100mg
  - 300mg
  - 200mg
23. In the absence of ADH
- There would not be any water absorption in renal tubules
  - Facultative water absorption is deficient
  - Obligatory water absorption is decreased
  - Obligatory water absorption is increased





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24. Stimulation of both glucocorticoid and mineralocorticoid secretion is seen with
- Anxiety
  - Exercise
  - Low sodium diet
  - Hyperkalemia
25. The symptoms of hyper parathyroidism include all except
- Hypercalcemia
  - Calciurea
  - Osteitis fibrosa cystica
  - Increase in muscle tone
26. Turners syndrome has the following sex chromosomal combination
- XY
  - XO
  - YO
  - XXY
27. In the infertile man sperm count decreases beyond
- 20 million
  - 30 million
  - 40 million
  - 80 million
28. Length servo mechanism is
- A system of negative feedback device
  - It operates to maintain muscle tension
  - Acts to regulate posture at rest
  - Causes sustained contraction of the muscle
29. A localized lesion in one of the following structures would be expected to produce prolonged coma
- Limbic cortex
  - Frontal lobe
  - Locus coeruleus
  - ARAS at the level of mid brain
30. Berger rhythm refers to
- Beta rhythm
  - Theta rhythm
  - Alpha rhythm
  - Delta rhythm



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31. Thalamic phantom limb is due to loss of one of the following sensation
- a) Proprioception
  - b) Stereognosis
  - c) Thermal sensation
  - d) Tactile sensation
32. Itch sensation is carried by
- a) Spinocerebellar tract
  - b) Anterior spinothalamic tract
  - c) Lateral spinothalamic tract
  - d) Dorsal column tract
33. The role of chromium in the body is
- a) Erythropoiesis
  - b) Growth
  - c) Reduces free radical formation
  - d) Spermatogenesis
34. Oxygen debt
- a) Is impossible to occur when breathing pure oxygen
  - b) Can never occur in healthy individuals
  - c) Is often evidenced by an increase in lactic acid concentration in the blood
  - d) Is caused by lack of anaerobic metabolism
35. Which area of hypothalamus function as thermostat
- a) Preoptic
  - b) Paraventricular
  - c) Dorsomedial
  - d) lateral





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**Pharmacology (Medical)**

**Part – B**

**[35x1=35]**

1. Regarding, Clinical Pharmacology which of the statement is WRONG:
  - A. Scientific study of drugs
  - B. Includes study in healthy volunteers only
  - C. Aim is to practice evidence based medicine
  - D. Surveillance of patterns of drug use is a part of clinical pharmacology
2. Following are the routes used for Nicotine receptor agonist in treating tobacco dependence EXCEPT:
  - A. Nicotine transdermal patches
  - B. Nicotine nasal spray
  - C. Nicotine oral inhaler
  - D. Nicotine tablets orally
3. Factors governing volumes of drug distribution are TRUE EXCEPT
  - A. PKA value of the drug
  - B. Diseases like CHF, Uremia, Cirrhosis
  - C. Affinity for different tissues
  - D. Drug restricted to vascular compartment will have high volume of distribution
4. Which of the following has lowest percentage of Plasma Protein binding
  - A. Lorazepam
  - B. Alprazolam
  - C. Diazepam
  - D. Flurazepam
5. Which of the following statement is wrong about active metabolites
  - A. Allopurinol : Alloxanthine
  - B. Digitoxin : Digoxin
  - C. Codeine : Morphine
  - D. Losartan : Valsartan
6. Microsomal enzymes are present in following EXCEPT
  - A. Cytoplasm
  - B. Mitochondria
  - C. Plasma
  - D. Endoplasmic reticulum
7. Which statement is wrong:
  - A. Quinidine blocks myocardial Na<sup>+</sup> channel



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- B. Nicorandil opens ATP sensitive  $K^+$  channel
  - C. Amiloride inhibits renal epithelial  $Ca^{+}$  channel
  - D. Ethosuximide inhibits T-type of  $Ca^{+}$  channels
8. Following are receptor functions EXCEPT:
- A. To propagate regulatory signals from outside to inside of cell
  - B. To amplify the signal
  - C. To integrate regulatory signals
  - D. To help in apoptosis
9. Which drug produces severe hepatitis
- A. Zafirlukast
  - B. Pranlukast
  - C. Zileuton
  - D. Monteleukast
10. All are second generation fluoroquinolones EXCEPT:
- A. Prulifloxacin
  - B. Pefloxacin
  - C. Levofloxacin
  - D. Gemifloxacin
11. Statement about cephalosporins is true EXCEPT:
- A. Chemically related to Penicillin
  - B. All are bactericidal
  - C. All have long half life
  - D. There are 5 generations of cephalosporins
12. Chloramphenicol is the preferred drug of choice in the following conditions EXCEPT:
- A. Typhoid fever
  - B. Pyogenic meningitis
  - C. Anaerobic infection
  - D. Intraocular infection
13. In acute UTI, which empirical antimicrobial treatment schedule is WRONG:
- A. Ciprofloxacin 250-500mg 12hrly
  - B. Ofloxacin 200-400mg 12hrly
  - C. Cephalexin 250-500mg 12hrly
  - D. Cotrimoxazole 960mg 12hrly
14. All statement about Clarithromycin are true EXCEPT:
- A. Only macrolide against *M. leprae*
  - B. More bactericidal than Rifampin



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- C. Monotherapy cause 99.9% effect
  - D. Synergistic with Minocycline
15. Newer non-retroviral drugs for HCV infection are EXCEPT:
- A. NS-5B polymerase inhibitor – Sofosbuvir
  - B. NS-3 Protease inhibitor – Simeprevir
  - C. NS 5A inhibitor – Daclatasvir
  - D. NS 5B inhibitor – Ledipasvir
16. From the following, which Antiretroviral drug combination is to be avoided:
- A. Zidovudine + Stavudine + Lamivudine
  - B. Lamivudine + Tenofovir + Efavirenz
  - C. Lamivudine + Zidovudine + Efavirenz
  - D. Zidovudine + Lamivudine + Nevirapine
17. First orally active drug for Kala-Azar approved in 2002 in India:
- A. Miltefosine
  - B. Paromomycin
  - C. Sodium Stibogluconate
  - D. Amphotericin-B
18. All are Anticancer drugs acting as angiogenesis inhibitors, EXCEPT:
- A. Bevacizumab
  - B. Sunitinib
  - C. Sorafenib
  - D. Bortezomib
19. All are Statement about IL-2 receptor antagonist, EXCEPT
- A. Anti CD-25 antibodies
  - B. Specifically arrest activated T-cells
  - C. Stimulated macrophages elaborate IL-2
  - D. Daclizumab is an example of IL-2 receptor antagonist.
20. All are antisera obtained from horse; EXCEPT:
- A. Tetanus antitoxin (ATs)
  - B. Diphtheria antitoxin (ADS)
  - C. Antirabies serum (ARS)
  - D. Rabies immunoglobulin
21. Contraindication for Quinidine therapy EXCEPT:
- A. QT. prolongation
  - B. Myasthenia gravis
  - C. Acute heart failure
  - D. Hypotension



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22. All drugs acting centrally and act as antihypertensive EXCEPT:
- A. Clonidine
  - B. Methyl dopa
  - C. Moxonidine
  - D. Reserpine
23. All are adverse effect of corticosteroids EXCEPT:
- A. Oropharyngeal candidiasis
  - B. Hoarseness of voice
  - C. Osteoporosis
  - D. HPA axis suppression in very low dose
24. In Neutropenia, which of the following drug is given as single injection:
- A. Filgrastim
  - B. Nofgrastim
  - C. Lenograstim
  - D. Pegfilgrastim
25. Which Benzothiadiazide got longest duration of action as diuretics:
- A. Chlorthalidone
  - B. Chlorothiazide
  - C. Polythiazide
  - D. Cyclopenthiazide
26. Which hypolipidemic agent acts on elevated Triglycerides
- A. Cholestyramine
  - B. Fibrates
  - C. Nicotinic acid
  - D. Statins
27. Which proton pump inhibitor has having maximum bioavailability:
- A. Omeprazole
  - B. Rabeprazole
  - C. Lansoprazole
  - D. Pantoprazole
28. Clonidine is used in ALL EXCEPT:
- A. Hypertension
  - B. Menopausal hot flushes
  - C. Diagnosis of growth hormone deficiency
  - D. As antagonist of post synaptic adrenergic  $\alpha_2$  receptors



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29. Spironolactone act at the following sites; EXCEPT:
- A. Interstitial site
  - B. Luminal site
  - C. On progesterone receptors
  - D. On androgen receptors
30. Benzodiazepine derivative with effective half-life more than 24hrs are EXCEPT:
- A. Diazepam
  - B. Flurazepam
  - C. Lorazepam
  - D. Clorazepate
31. In Epilepsy, Sodium valproate is used in all EXCEPT:
- A. Petitmal
  - B. Myoclonic
  - C. Petitmal with tonic clonic seizures
  - D. Febrile seizures
32. Which drug is given as epidural local anesthetic
- A. Procaine HCl
  - B. Amethocaine HCl
  - C. Bupivacaine
  - D. Cinchocaine
33. Absolute contraindication of beta blockers are All EXCEPT:
- A. Severe bradycardia
  - B. Existing high grade heart block
  - C. Severe depression
  - D. Prinzmetal's angina
34. Drugs used for prevention of migraine attack are following EXCEPT:
- A. Pizotifen
  - B. Amitriptyline
  - C. Verapamil
  - D. Ergot alkaloids
35. Which of the following is NOT a therapy studied in the ongoing DISCOVERY trial for COVID 19
- A. Remdesivir
  - B. Hydroxy chloroquine
  - C. Ivermectin
  - D. Interferon B





**Community Medicine**

**Part -B**

**[35x1=35]**

1.The ascending time sequence of four distinct Phases in public health are.

- a) Health for all, Health promotional phase, Disease control phase, social engineering phase.
- b) Social engineering, Health for all, Disease control phase, Health promotional phase.
- c) Disease control phase, Health promotional phase, social engineering phase, Health for all.
- d) Health promotional phase, Disease control phase, social engineering phase, Health for all.

2.Human development index is an indicator of

- a) Quality of life
- b) Concept of life
- c) Dimensions of Health
- d) Determinants of Health

3.An example of Mortality indicator includes .....

- a) Durations of hospital stay.
- b) Doctor-Nurse Ratio
- c) Per capita calorie availability
- d) Case Fatality Rate

4.Epidemiological Triad includes .....

- a) Time, Money, Nutrition
- b) Agent, Host, Environment
- c) Mother, Father, Child
- d) Rural, Urban, Tribal

5.Method for identifying the missing cases and thereby supplementing the notifying cases is known as

- a) Monitoring
- b) Verbal Autopsy
- c) Sentinel Surveillance
- d) Tracking

6.Secondary prevention is aimed to .....

- a) Reduce the incidence of disease.
- b) Maintain conditions that minimize hazards to health.
- c) Reduce number &/or impact of complications.
- d) Reduce prevalence of disease by shortening its duration.

7.Example of Special Incidence Rate is

- a) Period prevalence
- b) Secondary attack rate
- c) Specific death rate
- d) Point Prevalence





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8. An example of Experimental study

- a) Cohort
- b) Randomised Controlled Trial
- c) Case - Control
- d) Ecological

9. Example of Non-probability sampling technique is.

- a) Simple Random Sampling
- b) Systematic Random Sampling
- c) Snowball sampling
- d) Stratified Random Sampling

10. Framingham Heart study is an example of

- a) Case control study
- b) Randomized Controlled Trial
- c) Ecological study
- d) Cohort study

11. The correlation coefficient “r” lies between

- a) 0 to +1
- b) Above +1
- c) -1 to 0
- d) -1.0 and +1.0

12. Warning signs of POOR mental health includes.

- a) Being happy
- b) Liking to be with people.
- c) Chronic regular insomnia
- d) Concentration at work

13. Measures designed to prevent hazards & lessen the effects of emergencies in a disaster includes.

- a) Disaster preparedness
- b) Disaster cycle
- c) Disaster response
- d) Disaster mitigation

14. Disease transmitted by Aedes mosquito.

- a) Malaria
- b) Japanese Encephalitis
- c) Dengue
- d) Filariasis



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15. Socio economic status scale that includes education, occupation & family income per month

- a) Economic index
- b) Wealth index
- c) Kuppu swamy's SES Scale
- d) BG Prasad classification

16. What type of data are the stages of oral cancer (Stage 1,2,3) considered?

- a) Nominal
- b) Ordinal
- c) Continuous
- d) Discrete

17. Among the following, which is NOT a measure of central tendency?

- a) Mode
- b) Mean
- c) Median
- d) Range

18. Which type of graph is NOT well-suited for representing nominal data?

- a) Donut chart
- b) Pie chart
- c) Bar graph
- d) Scatter plot

19. Biological transmission may include .....

- a) Multiplication only without change in form.
- b) Development without any multiplication
- c) Change in form as well as number.
- d) Involvement of vertebrate host

20. In the iceberg phenomenon of disease:

- 1. The submerged portion of the iceberg represents inapparent cases.
- 2. A list is made of existing and apparent cases.
- 3. Physicians see only tip of the iceberg.
- 4. All diagnosed cases are treated.

Code:

- a) (1) and (2)
- b) (1) and (3)
- c) (1) and (4)
- d) (2) and (4)



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21. Insulin resistance syndrome has:

1. Dyslipidaemia
2. Ketoacidosis
3. Hypertension
4. Hypoinsulinaemia

Correct answer is:

- a) (1) (2) and (3) are correct.
- b) (1) and (3) are correct.
- c) (3) and (4) are correct.
- d) (1) and (2) are correct.

22. Match List - I with List - II.

### Dietary sources of vitamin C:

List - I (Fruits)	List - II (Vitamin C mg/100g)
1. Amla	(i) 63
2. Guava	(ii) 600
3. Lime	(iii) 30
4. Orange	(iv) 212

Code:

- |    |       |      |       |       |
|----|-------|------|-------|-------|
|    | 1     | 2    | 3     | 4     |
| a) | (i)   | (ii) | (iii) | (iv)  |
| b) | (ii)  | (iv) | (i)   | (iii) |
| c) | (iii) | (ii) | (iv)  | (i)   |
| d) | (iv)  | (i)  | (ii)  | (iii) |

23. Match the following List - I with List - II.

Prevalence Criteria for determining the xerophthalmia problem:

List - I (Criteria)	List - II (Prevalence in Population at risk (6 months to 6 years))
1. Night blindness	(i) More than 0.5 percent
2. Bitots spots	(ii) More than 0.01 percent
3. Corneal xerosis	(iii) More than 0.05 percent
4. Corneal ulcer	(iv) More than 1 percent

Code:

- |    |       |       |       |       |
|----|-------|-------|-------|-------|
|    | 1     | 2     | 3     | 4     |
| a) | (iii) | (ii)  | (iv)  | (i)   |
| b) | (ii)  | (iii) | (i)   | (iv)  |
| c) | (i)   | (ii)  | (iii) | (iv)  |
| d) | (iv)  | (i)   | (ii)  | (iii) |



## VINAYAKA MISSION'S RESEARCH FOUNDATION, SALEM

(Deemed to be University under section 3 of the UGC Act 1956)

24. Mass chemoprophylaxis is recommended for:

1. Meningococcal meningitis
2. Cholera
3. Influenza
4. Typhoid

Correct answer is:

- a) (1), (2) and (3) are correct.
- b) (1) and (3) are correct
- c) (2) and (4) are correct
- d) (3) and (2) are correct

25. Which is the most dangerous for transmitting Plague?

- a) Blocked flea
- b) Partially blocked flea
- c) Unblocked flea
- d) Any flea

26. Reverse Cold Chain is used for:

- a) Transporting out of expiry date oral Polio Vaccines from PHC to District Hospital
- b) Carrying stool samples of Polio Patients from PHC to Lab
- c) Transporting vaccine from centres to outreach sessions.
- d) Shifting vaccines from ILR to deep freeze

27. Daily requirements of iodine during pregnancy are:

- a) 100  $\mu\text{g}$
- b) 150  $\mu\text{g}$
- c) 200  $\mu\text{g}$
- d) 250  $\mu\text{g}$

28. Which of the following is an intervention study?

- a) Ecological
- b) Field trial
- c) Case control
- d) Cross sectional

29. In demography family size means:

- a) Total number of persons in family
- b) Total number of daughters in the family
- c) Total number of children a woman has borne at a point in time.
- d) Total number of children borne by a woman between age of 15 - 45 years

30. The following statements are correct about the newly introduced injectable contraceptive Depot Medroxy Progesterone Acetate (DMPA) in the National Family Welfare Program **EXCEPT**:

- a) It is injected subcutaneously.
- b) It contains 104 mg of Depot Medroxy Progesterone Acetate
- c) It is as effective as intramuscular.
- d) It is given at 6-month interval.



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31. Which animal shows signs of encephalitis due to J.E. virus:

- a) Pig
- b) Horse
- c) Mosquito
- d) Cow

32. Acculturation has been linked to all **EXCEPT**:

- a) Linking other culture but not adopting it
- b) Cultural contact
- c) Diffusion of culture
- d) Cultural barrier pattern of people to be discussed through Radio, TV, and Cinema

33. Feature of very severe disease in a child with acute respiratory infection is:

- a) Nasal flaring
- b) Chest indrawing
- c) Cyanosis
- d) Severe malnutrition

34. Mass treatment approach has been successful in the control of the disease given below in India

- a) Leprosy
- b) Malaria
- c) Trachoma
- d) Diabetes

35. Leprosy elimination programme is best evaluated by:

- a) Ratio of disability as compared to new cases.
- b) Ratio of multibacillary to paucibacillary cases
- c) Percentage of Lepromin positive in the newly detected cases
- A. Detection of new cases





**Microbiology (Medical)**

**Part -B**

**[35x1=35]**

1. Axenic culture medium for *E. histolytica* is
  - A. Book & drbohalav's medium
  - B. Diamonds medium
  - C. Balamuth's medium
  - D. Nelson's medium
2. Maltese cross a tetrad form is present in
  - A. Classical filariasis
  - B. Occult filariasis
  - C. Baberiosis
  - D. Cryptosporidiosis
3. The intermediate host of *S. haematobium* is
  - A. *Bulinus* spp
  - B. *Biomphalaria* spp
  - C. *Oncomelania* spp
  - D. Man
4. Visceral larva migrans is caused by all except
  - A. *Toxocara*
  - B. *Angiostrongylus*
  - C. *Gnathostoma*
  - D. *Stongyloides*
5. Maurer's dots are present in
  - A. *P. vivax* infection
  - B. *P. falciparum* infection
  - C. *P. malaria* infection
  - D. *P. ovale* infection
6. Zika virus is transmitted by
  - A. *Phlebotomus argentipes*
  - B. *Phlebotomus sergenti*
  - C. *Culex vishnui* complex
  - D. *Aedes aegypti*



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7. An HIV-positive patient with a viral load of 100,000 copies/mL of HIV RNA and a drop in his CD4 T-cell count from 240 to 50/ $\mu$ L has been diagnosed with *Pneumocystis jiroveci* pneumonia. Which of the following is the best description of the stage of this patient's HIV disease?
- A. HIV infection, stage 1
  - B. HIV infection, stage 2
  - C. HIV infection, stage 3 (AIDS)
  - D. HIV infection, stage unknown
8. Radial immunodiffusion and immune electrophoresis is performed on a young patient to evaluate the function of his humoral immune system. Which of the following immunoglobulins has no known function, is found in the serum in low concentrations, and is present on the surface of B lymphocytes (may function as an antigen receptor)?
- A. IgG
  - B. IgA
  - C. IgM
  - D. IgD
9. A patient with an increased susceptibility to viral, fungal, and protozoa infection would be expected to have a deficiency in which of the following cell types?
- A. B lymphocytes
  - B. Macrophages
  - C. T lymphocytes
  - D. Neutrophils
10. The following best describes TCR recognition of antigen:
- A. Binds to conformational determinants of whole proteins
  - B. Binds to peptide in the context of MHC
  - C. Binds to peptide without MHC
  - D. Binds to large glycoproteins
11. Tumbling motility is seen in
- A. *Vibrio cholera*
  - B. *Listeria*
  - C. *Clostridium*
  - D. *Mycoplasma*
12. Which of the following vaccines is killed vaccine
- A. Measles vaccine
  - B. Rubella vaccine
  - C. Rabies vaccine
  - D. Mumps vaccine



13. The following are continuous cell lines except
  - A. HeLa
  - B. HEp-2
  - C. BHK-21
  - D. WI-38
14. The common name for Human herpesvirus –5
  - A. Cytomegalovirus
  - B. Epstein-Barr virus
  - C. Varicella-zoster virus
  - D. Herpesvirus simiae
15. Ante mortem diagnosis of rabies is
  - A. Demonstration of nucleoprotein antigens by DFA
  - B. Demonstration of negri bodies by seller's technique
  - C. Demonstration of negri bodies by DFA
  - D. Isolation of virus from hippocampus
16. Candida albicans is isolated in blood culture from a patient in a surgical intensive care unit. This most likely source of the infecting organism is
  - A. A visitor
  - B. Ambient air
  - C. The patient
  - D. The surgeon
17. A fungal teleomorph is
  - A. Asexual reproductive form
  - B. Infective form for humans
  - C. Sexually reproductive form
  - D. Dormant for
18. The resistant mechanism which is described in bacteria but not in fungi is
  - A. Alteration in the drug target
  - B. Efflux of drug
  - C. Inactivation of drug
  - D. Influx of drug
19. The most likely clinical condition occurring in an immunocompromised patient due to A. fumigatus is
  - A. Allergic bronchopulmonary response
  - B. Aspergilloma
  - C. Invasive pulmonary infection
  - D. Otomycosis





20. Ergototoxicosis is caused by
- A. Rhizomucor
  - B. Conidiobolus
  - C. Lichtheimia
  - D. Claviceps
21. Sclerotic bodies are present in:
- A. Mycetoma
  - B. Sporotrichosis
  - C. Chromoblastomycosis
  - D. Rhinosporidiosis
22. Which of the following specimens is the most important for diagnosis of carriers in enteric fever
- A. Blood
  - B. Faeces
  - C. Urine
  - D. Pus
23. Nocardia resemble actinomyces morphologically but
- A. Are anaerobic
  - B. Are facultative anaerobic
  - C. Are aerobic
  - D. Require CO<sub>2</sub> for growth
24. Major step in pathogenesis of listeriosis is
- A. The formation of antigen – antibody complexes with resultant complement activation and tissues damage
  - B. The release of hyaluronidase by L. monocytogenes, which contributes to its dissemination from local sites
  - C. The antiphagocytic activity of the L. monocytogenes, capsule
  - D. The survival and multiplication of L. monocytogenes, within mononuclear phagocytes and host epithelial cells
25. Browne's tube is used for
- A. Steam sterilization
  - B. Radiation
  - C. Chemical sterilization
  - D. Filtrations
26. Taq polymerase is obtained from
- A. E coli
  - B. Bacillus subtilis
  - C. Bacillus stearothermophilus
  - D. Thermus aquaticus



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27. Which of the following statements is most correct regarding resistance to methicillin in MRSA
- A. Resistance is produced as a result of alteration in penicillin binding proteins (PBP - ans
  - B. Resistance is produced by production beta- lactamase
  - C. Resistance is mediated by plasmid
  - D. Expressions of resistance is enhanced by incubating at 37° C
28. Toxin involved in streptococcal toxic shock syndrome is
- A. Pneumolysin
  - B. Erythrogenic exotoxin
  - C. Haemolysin
  - D. Neurotoxin
29. The best site to obtain a swab in asymptomatic gonorrhea is
- A. Endocervix
  - B. Urethra
  - C. Lateral vaginal wall
  - D. Posterior fornix
30. True statement about diphtheria toxin is
- A. Toxin Is phage mediated
  - B. Toxin is required for local infections
  - C. Endotoxemia causes systemic manifestation
  - D. Toxin act by inhibiting synthesis of capsule
31. Opacity around colonies of clostridium perfringens is due to
- A. Theta toxin
  - B. Lecithinase
  - C. Desmolase
  - D. Cytokinin
32. Rapid examination of tubercle bacilli is possible with
- A. Ziehl –Neelsen stain
  - B. Kinyoun stain
  - C. Auramin – rhodamine stain
  - D. Giemsa stain
33. Which of the following statement is true about Vibrio cholera
- A. There is no natural reservoir
  - B. Transported in alkaline peptone water medium
  - C. Halophilic
  - D. Oxodase negative



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34. Transovarial transmission is a feature of
- A. Scrub typhus
  - B. Epidemic typhus
  - C. Endemic typhus
  - D. Trench fever
35. In a syphilis patient, site which does not help in isolation of organism is
- A. Gumma
  - B. Primary chancre
  - C. Mucosal patch
  - D. Maculopapular rash





**Biochemistry (Medical)**

**Part -B**

**[35x1=35]**

1. Enzyme defect in Niemann pick disease is
  - a. Beta glucosidase
  - b. Sphingomyelinase
  - c. Beta galactosidase
  - d. Hexosaminidase-A
2. Bile acids are derived from
  - a. Phospholipids
  - b. Triacylglycerol
  - c. Fatty Acids
  - d. Cholesterol
3. The enzyme absent in Adipose tissue is
  - a. Hormone sensitive lipase
  - b. Glycerol kinase
  - c. cAMP – dependent protein kinase
  - d. Glycerol – 3 – phosphate dehydratase
4. Antihemorrhagic vitamin is
  - a. Vitamin A
  - b. Vitamin E
  - c. Vitamin K
  - d. Vitamin D
5. Which of the following vitamins provides the co enzyme for transamination of amino acids?
  - a. Thiamine
  - b. Pyridoxine
  - c. Niacin
  - d. Folic acid
6. Biotin is involved in
  - a. Oxidation – reduction
  - b. Carboxylation
  - c. Decarboxylation
  - d. Dehydration
7. Negative nitrogen balance is seen in the following conditions except
  - a. Vegetarian diet
  - b. Cytotoxic therapy
  - c. Extensive burns
  - d. Traumatic hemorrhage



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8. Which of the following enzyme is involved in Glucuronidation reaction?
- UDP – Glucose phosphorylase
  - UDP – Glucuronyl transferase
  - Glucose transferase
  - Glucuronidase
9. Deficiency of glucose 6 phosphate dehydrogenase causes?
- Cataract
  - Hemolytic anemia
  - Hypoglycemia
  - Mental retardation
10. Mc Ardle's syndrome is due to deficiency of
- Glucose – 6 – phosphatase
  - Glyceraldehyde – 3 phosphate dehydrogenase
  - Phosphofructokinase
  - Muscle glycogen phosphorylase
11. The mobile carriers in electron transport chain are
- Cytochrome c and coenzyme Q
  - Cytochrome a and coenzyme Q
  - Cytochrome a-a<sub>3</sub>
  - Cytochrome b and cytochrome a
12. Degradation of heme to bilirubin releases one molecule of
- Carbon dioxide
  - Water
  - Ammonia
  - Carbon monoxide
13. The net gain of ATP per molecule of palmitic acid on complete oxidation is
- 12
  - 108
  - 106
  - 135
14. Inulin clearance is used to assess
- Renal threshold
  - Concentrating ability of tubules
  - Glomerular filtration rate
  - Diluting ability of tubules
15. Dietary fats after absorption appear in the circulation as
- High density lipoprotein(HDL)
  - Very low density lipoprotein (VLDL)
  - Low density lipoprotein (LDL)
  - Chylomicron



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16. Increased urinary indole acetic acid is diagnostic of
  - a. Maple syrup urine disease
  - b. Homocystinuria
  - c. Phenylketonuria
  - d. Hartnup's disease
17. Which of the following amino acid is exclusively ketogenic
  - a. Leucine
  - b. Lysine
  - c. Tyrosine
  - d. Phenylalanine
18. Cross links present in Collagen are, except
  - a. Aldol condensation
  - b. Schiff's base
  - c. Lysine or Leucine
  - d. Desmosine
19. Common precursor for Pyrimidine and Purine nucleoside biosynthesis is
  - a. Phosphoribosyl pyrophosphate
  - b. Glycine
  - c. Fumarate
  - d. Alanine
20. Which of the following enzyme fills the gap between Okazaki fragments?
  - a. DNA polymerase
  - b. RNA polymerase
  - c. Translocase
  - d. Helicase
21. Action of Telomerase is
  - a. DNA repair
  - b. Longevity of cell aging
  - c. Breakdown of telomere
  - d. RNA repair
22. Which of the following is not essential for polymerase chain reaction?
  - a. Taq polymerase
  - b. dNTP
  - c. Primer
  - d. Radiolabeled DNA probe
23. All are true with Ceruloplasmin, except
  - a. It is a copper containing protein found in serum
  - b. It is an acute phase protein
  - c. Blood level is increased in Wilson's disease
  - d. It has Ferroxidase activity



24. Which of the following is a negative acute phase reactant protein?

- a. Albumin
- b. Ceruloplasmin
- c. C Reactive protein
- d. Haptoglobin

25. All the following lipids are present in cell membranes except

- a. Lecithin
- b. Cholesterol
- c. Sphingomyelin
- d. Triacylglycerol

26. Molybdenum is a constituent of

- a. Hydroxylases
- b. Oxidases
- c. Transaminases
- d. Transferases

27. A patient with bronchial asthma has

- a. Respiratory acidosis
- b. Respiratory alkalosis
- c. Metabolic alkalosis
- d. Metabolic acidosis

28. The following hormones have membrane receptors except

- a. Insulin
- b. Epinephrine
- c. Glucagon
- d. Thyroxine

29. Which of the following trace element has an antioxidant role?

- a. Chromium
- b. Selenium
- c. Zinc
- d. Nickel

30. All the following trace elements are required by the body, except

- a. Zinc
- b. Copper
- c. Selenium
- d. Boron

31. Zinc is present in all the enzymes, except

- a. Alkaline phosphatase
- b. Amylase
- c. Carbonic anhydrase
- d. RNA polymerase



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32. Alpha fetoprotein level in serum is increased in
- Prostatic cancer
  - Hepatoma
  - Cancer lungs
  - Nephritis
33. Methotrexate blocks the synthesis of thymidine monophosphate by inhibiting the enzyme:
- Dihydrofolate reductase
  - Orotate phosphoribosyl transferase
  - Ribonucleotide reductase
  - Dihydro-orotase
34. The antibody class which can pass through the placenta to protect fetus is :
- IgA
  - IgG
  - IgE
  - IgD
35. Beta glycosidic bond is present in
- Starch
  - Heparin
  - Lactose
  - Glycogen

