



INI- CET JULY 2021
DETAILED SOLUTIONS

PATHOLOGY

Q1. Which of the following is the correct sequence of cellular events of acute inflammation?

1. Rolling → Stable adhesion → Activation of integrins → Migration via endothelium (Transmigration)
2. Rolling → Activation of Integrins → Stable Adhesion → Migration via endothelium (Transmigration)
3. Stable adhesion → Rolling → Activation of integrins → Migration via endothelium
4. Activation of integrins → Migration via endothelium → Stable adhesion → Rolling

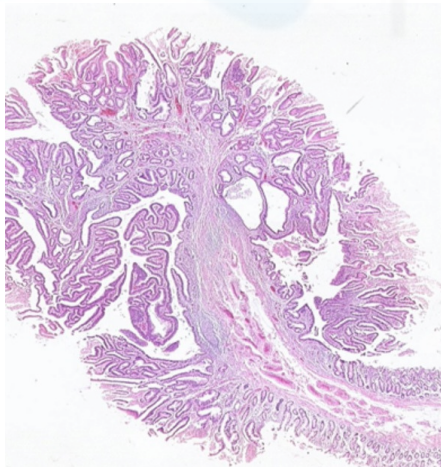
Q2) Minimum cut off for normal sperm morphology?

- 1) 4%
- 2) 8%
- 3) 10%
- 4) 2%

Q3) Which HPV protein causes cervical carcinoma by mutation of Rb gene?

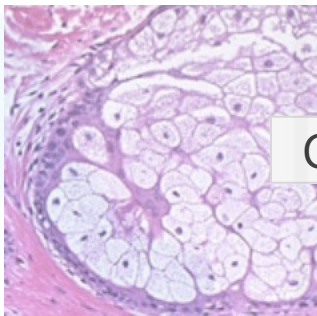
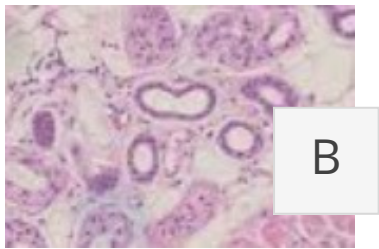
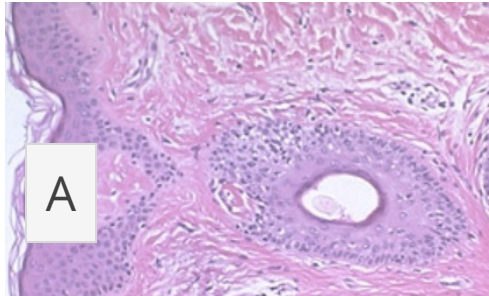
- 1) L1
- 2) E1
- 3) E6
- 4) E7

Q4) Identify the polyp shown:



- 1) Hamartomatous polyp
- 2) Tubulovillous adenoma
- 3) Juvenile inflammatory polyp
- 4) Villous adenocarcinoma

Q5) CFTR gene mutation affects which of the following structures?

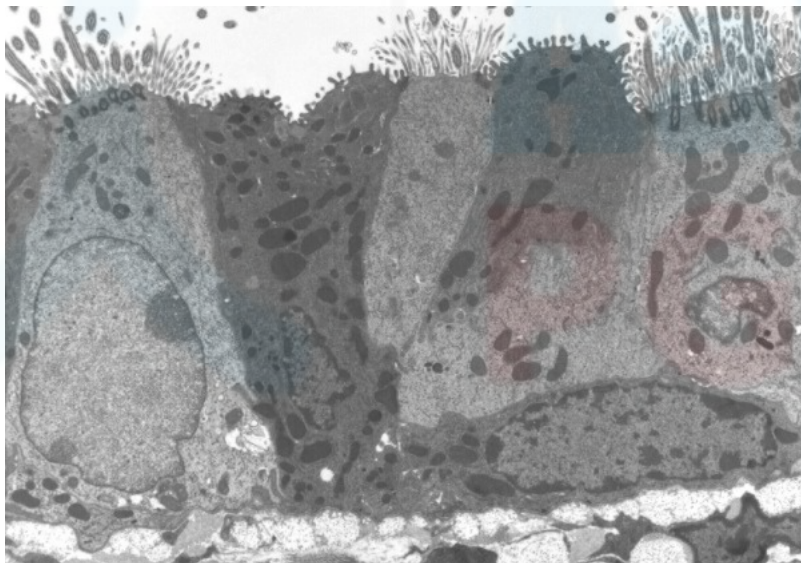


- 1)a
- 2)b
- 3)c
- 4)d

Q6) Which of the following is associated with Aplasticcrisis?

- 1)Parvovirus
- 2)EBV
- 3)Adenovirus
- 4)Hepatitis B

Q7) Which of the following layers undergoes expansionand inflammation in Transmission electron microscopy?



- A
- B
- C
- D

- 1)A
- 2)B
- 3)C
- 4)D

Q8) Which of the following is used for treatment forSideroblastic anemia

- 1)Iron
- 2)Vitamin B6
- 3)Vitamin B12
- 4)Vitamin B1

Q9) PNH does not cause which of the following?

- 1) Aplastic Anemia
- 2) Thrombosis
- 3) Hemolysis
- 4) Leukemia

Q10) Which are the effector cells in Type IV hypersensitivity reaction?

- 1) Macrophages
- 2) Neutrophils
- 3) Cytotoxic CD8 T cells
- 4) Dendritic cells

Q11) Which of the following are involved in initial response in Type I hypersensitivity reaction?

- a) Histamine release
- b) Leucotriene release and prostaglandin
- c) Mast cell activation
- d) Neutrophil activation

- 1) a,b,c
- 2) a,c,d
- 3) a,d
- 4) b,c,d

Q12) Which of the statement is true amongst the following?

- 1) BRCA-1 is a protooncogene; mutation causes Ca Breast
- 2) MYC is a tumor suppressor gene
- 3) EGFR is increased in Small cell lung carcinoma
- 4) HER-2 is seen in a fraction of Breast carcinoma

Q13) Which of the following is Desmin positive tumor?

- 1) Ewings sarcoma
- 2) Medulloblastoma
- 3) Lymphoma
- 4) Rhabdomyosarcoma

Q14) PAP smear fixative:

- 1)95% Ethyl alcohol
- 2)10% Formalin
- 3)Methanol
- 4)Air dried

Q15) Sequence of AFB staining?

- 1)Carbol Fuschin Acid alcohol fixative Methyleneblue
- 2)Hematoxylin Alcoholic formalin Methyleneblue
- 3)Carbol fuschin Acetic acid Hematoxylin
- 4)Harris hematoxylin Alcohol Eosin

Q16) All viruses integrate with human genome except?

- 1)HPV
- 2)EBV
- 3)HTLV-1
- 4)Hepatitis B

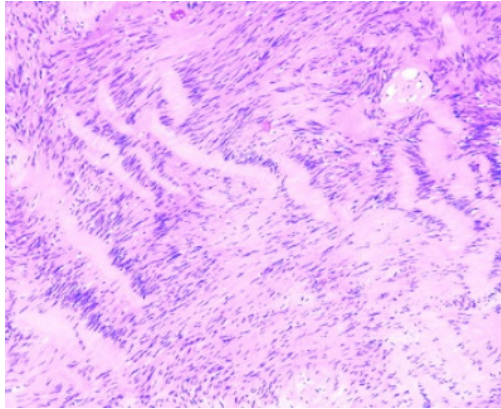
Q17) Most common Lacrimal gland tumor?

- 1)Pleomorphic adenoma
- 2)Adenoid cystic carcinoma
- 3)Lymphoma
- 4)Mucoepidermoid carcinoma

Q18) Which of the following is origin of CLL?

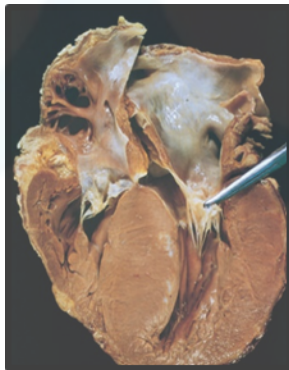
- 1)Centrocytes
- 2)Extranodal mature peripheral B cells
- 3)Naïve B cells in interfollicular regions
- 4)Bone marrow progenitors

Q19) A 30 year old came with history of tinnitus and sensorineural hearing loss. Biopsy findings are shown below. What is your diagnosis?



- 1) Schwannoma
- 2) Neuroblastoma
- 3) Rhabdomyosarcoma
- 4) Leiomyoma

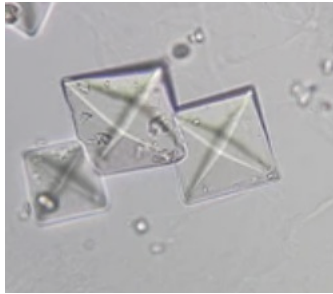
Q20) A 32 year old athlete died in the basketball court. Gross specimen of heart is shown. What was the cause of death?



Gross Heart

- 1) Sudden cardiac death due to HOCM; screen the family members
- 2) Sudden cardiac death due to Arrhythmias
- 3) Sudden cardiac death due to Atherosclerosis
- 4) Valvular heart disease due to RHD

Q21) Identify the crystals?

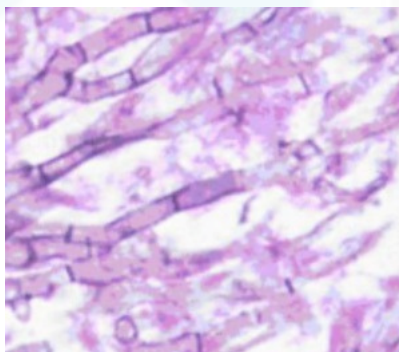


- 1) Calcium oxalate
- 2) Urate crystals
- 3) Calcium phosphate
- 4) Triple phosphate crystals

Q22) Which of the following is the gold standard investigation for Myocarditis?

- 1) Cardiac biopsy
- 2) MRI
- 3) d-Dimer
- 4) Pro BNP

Q23) Cardiac vegetations were excised and sent for biopsy. Identify the causative organism?



- 1) Rhizopus
- 2) Mucor: Septate acute angled branching hyphae
- 3) Aspergillosis: Septate acute angled branching hyphae
- 4) Chromoblastomycosis

Q24) A 60 year old female with backache, constipation, confusion, osteolytic lesions, Hb: 7.3g%, TLC: Normal, Platelet: Normal Calcium: 13.1g/dl, Total protein: 9.1g/dl, Albumin: 2.4g/dl, Creatinine: 2.6mg/dl. What is your diagnosis?

- 1) Multiple myeloma
- 2) Primary hyperparathyroidism
- 3) Metastatic deposits Carcinoma breast
- 4) Milk alkali syndrome

Q25) Irradiated RBCs reduces incidence of:

1. GVHD
2. TRALI
3. Immunomodulation
4. HLA Immunization

Q26) Identify the karyotype shown in the image. Which of the following features are most likely to be seen in this syndrome?



- 1) Gynaecomastia and thin limbs
- 2) Webbed neck and short stature
- 3) Flat occiput
- 4) Pedal edema

Q27) A man with upper respiratory symptoms, allergy with pulmonary cavities, granuloma. What is the next investigation step?

- 1) ANCA and biopsy for granuloma
- 2) MDR for TB
- 3) Culture for fungus
- 4) Investigate for SCC Lung

Q28) Flow cytometry is reported as:

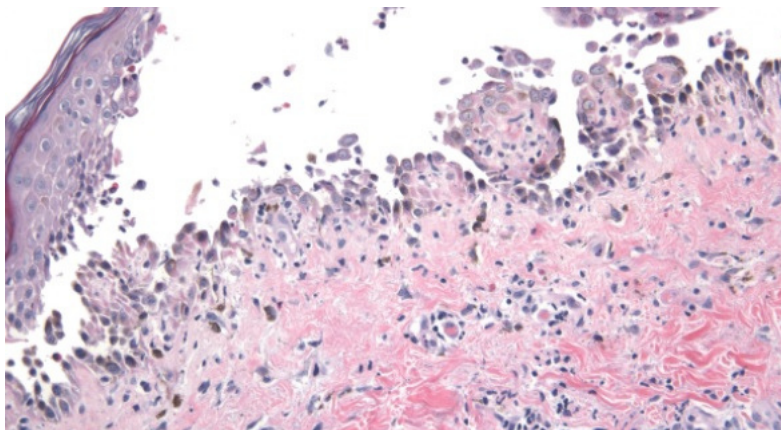
- 1) Dot plot and bar graph
- 2) Bar graph and dot plot
- 3) Pie chart and dot plot
- 4) Dot plot and histogram

Q29) Which of the following statements about G6PD deficiency are true?

- a) Not able to produce NADPH
- b) RBCs are immune to macrophages
- c) Inability to reduce glutathione
- d) Reduces lipid peroxidation of cell membranes

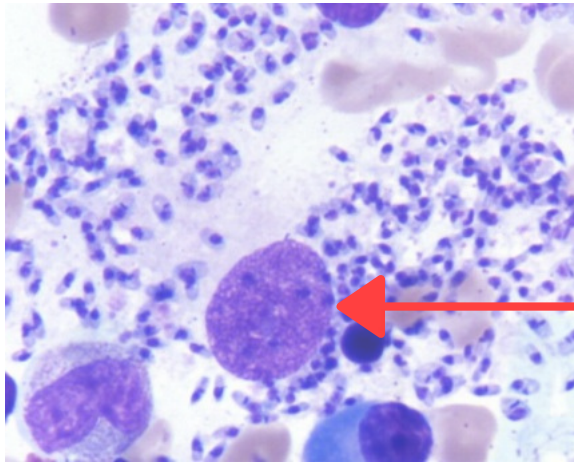
- 1) a,b,c,d
- 2) a,b,d
- 3) b,c
- 4) a,c

Q30) Identify the skin biopsy histopathology?



- 1) Pemphigus vulgaris
- 2) Leishmania
- 3) Leprosy
- 4) Mycosis fungoides

Q31) Identify the marked bodies in Bone marrow aspiration. Which infection is most likely seen?



- 1) Plasmodium
- 2) Leishmania
- 3) Coccidioides immitis
- 4) Rhinosporidiosis

Q32) Which of the following is RNA Based technique:

- 1) RT-PCR
- 2) Sanger sequencing
- 3) Western blot
- 4) Gel banding

ANSWERS

- Q1.Answer: 2
- Q2.Answer: 1
- Q3.Answer: 4
- Q4.Answer: 2
- Q5.Answer: 2
- Q6.Answer: 1
- Q7.Answer: 4
- Q8.Answer: 2
- Q9.Answer:4
- Q10.Answer:3
- Q11.Answer: 1
- Q12.Answer: 4
- Q13.Answer: 4
- Q14.Answer:1
- Q15.Answer: 1
- Q16.Answer:3
- Q17.Answer:1
- Q18.Answer: 3
- Q19.Answer: 1
- Q20.Answer: 1
- Q21.Answer:1
- Q22.Answer: 1
- Q23.Answer: 3
- Q24.Answer: 1
- Q25.Answer:1
- Q26.Answer: 1
- Q27.Answer:1
- Q28.Answer: 4
- Q29.Answer: 4
- Q30.Answer: 1
- Q31.Answer: 2
- Q32.Answer: 1

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