

10

LWS (DMS) 138

Many coming late



Department of Pathology
Azra Nahed Medical College
Grand Test-9, 17 August 2018
MBBS 3rd Year (MCQ)
(Parasitology, Genetics, Mycology)

Dr. T. S. 20/05/2020
Sendup
24/05/2020

Time Allowed: 25 min

Total Marks: 25

Name: _____
Roll No: _____
Date: _____

Instructions:
1. All objective questions are to be attempted on the paper and returned to the invigilator within specified time after you have received the question paper.
2. Any cuttings or overwriting in answering the objective part will not be accepted and no marks will be given even if the answer is correct.

Conjugation
A = T

A = T

1. Multiple members of a family have a disease that is associated with a genetic change that involves substitution of adenine for thymine involving one base pair on homologous chromosomes. What is the best term to describe this finding?
- a. Copy number variation
 - b. Deletion
 - c. Epigenetic change
 - d. Single nucleotide polymorphism
 - e. Trinucleotide repeat mutation

Single nucleotide polymorphism
SNT

Single mode

46XX

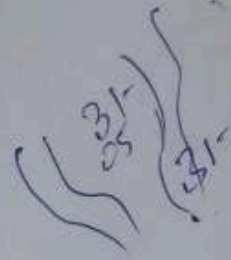
2. A female infant born at term shows failure to thrive and failure to achieve developmental milestones. A pedigree reveals only this child is affected out of four generations on both sides of the family. Tissue fibroblasts obtained from this child shows a 46,XX karyotype. Cultured fibroblasts show accumulation of an intermediate product in a metabolic pathway in which multiple enzymes are involved. What is the most likely recurrence risk for this condition in siblings of this infant?
- a. 3%
 - b. 8%
 - c. 15%
 - d. 25%
 - e. 50%

(20/05/2020) 25%

Feature of Marfan Syndrome

3. A 22 year old man has a sudden loss of vision in the eye. On physical Examination, there is a subluxation of the right crystalline lens. On auscultation of the chest, a mid-systolic click is audible. An echocardiogram shows a floppy mitral valve and dilated aortic arch. The patient's brother and his cousins are similarly affected. He is prescribed a beta blocker. A genetic defect involving which of the following substances is most likely to be present in this patient?
- a. Collagen
 - b. Dystrophin
 - c. Fibrillin-1
 - d. NF-1 protein
 - e. Spectrin

Fibrillin
Fibrinoid



03

07

02

03
03

complete blood count

4. A 13 year old boy has been drinking large quantities of fluids and has an insatiable appetite. He is losing weight and has become more tired and listless for the past month. Laboratory findings include normal CBC and fasting serum glucose of 175mg/dl. His parents, two brothers and one sister are healthy. A maternal uncle is also affected. Which of the following is the probable inheritance pattern of the disease?
- a. Autosomal dominant
 - b. Autosomal recessive
 - c. Mitochondrial DNA
 - d. Multifactorial
 - e. X-linked recessive

Autosomal recessive

Sendup 2020

5. A 23 year old woman, G2, P1, gives birth at 37 weeks to a small for gestational age male infant. The hand of the infant shows a single palmar flexion crease and a single flexion crease on the fifth digit. During the pregnancy, fetal ultrasound showed an endocardial cushion defect and polyhydramnios from probable duodenal atresia. Which of the following chromosomal abnormality is most likely to be present?

- a. 45,X
- b. 47,XX+21
- c. 47,XY+21
- d. 69,XXY
- e. 47,XXY

47,XX+21
47,XY+21
47,XX+21

Sendup 2020 47,XX+21

6. A 39 year old woman gives birth to a term infant with an umbilical hernia, brushfield spots on the iris, macroglossia, low set ears, oblique palpebral fissures and a heart murmur. The infant survives to childhood and exhibits only mild mental retardation. Which of the following chromosomal abnormality is most likely to be present in somatic cells of this child?

- a. Haploidy
- b. Monosomy
- c. Trisomy 21
- d. Tetraploidy
- e. Triploidy

Edward - E
Down syndrome

7. A 27 year old man and his 24 year old wife have been trying to conceive a child for 6 years. Physical examination shows he has gynecomastia, reduced testicular size, reduced body hair and increased length between the soles of his feet and pubic bone. A semen analysis indicates oligospermia. Laboratory studies show increased FSH levels and slightly decreased testosterone levels. Which of the following karyotypes is this man most likely to have?

- a. 46,Xi(Xq)
- b. 47,XYY
- c. 47,XXY
- d. 46,XX/47XX,+21
- e. 46,XY,del(22q11)

47,XYY Klinefelter

47,XXY

47,XXY

Sendup 2020

45X,46XX

145cm 4ft 9in

Scidup 2020

8. A 25 year old woman with amenorrhea has never had menarche. On physical examination she is 145cm (4 ft 9 in) tall. She has a webbed neck, a broad chest, and widely spaced nipples. Strong pulses are palpable in the upper extremities, but there are only weak pulses in the lower extremities. On abdominal MRI her ovaries are small, elongated and tubular. Which of the following karyotypes is she most likely to have?

45X,46XX

- a. 45,X/46,XX
- b. 46,X,X(fra)
- c. 47,XXY
- d. 47,XXX
- e. 47,XX,+16

Turner 45X 46XX

45X/46XX

45X,46XX

Scidup

9. A 22 year old primigravida notes absent fetal movement for 2 days. The fetus is delivered stillborn at 19 weeks gestation. The macerated fetus shows marked hydrops fetalis and a large posterior cystic hygroma of the neck. At autopsy, internal anomalies include aortic coarctation and a horseshoe kidney. Which of the following karyotypes is most likely to be present in cells obtained from this fetus?



- a. 45,X
- b. 47,XX,+18
- c. 47,XX,+21
- d. 47,XXY
- e. 69,XXX

45X

Edward's ?
Turner ?

Scidup

10. An organism with two identical alleles is

- a. Dominant
- b. Recessive
- c. Hybrid
- d. Homozygous
- e. Heterozygous

Homozygous
Homozygous?

11. Patient came to the emergency department with history of fever, shivering and body aches. Plasmodium vivax was diagnosed as a cause of malaria. This plasmodium is responsible for which type of malaria?

- a. Benign tertian malaria
- b. Quartan malaria
- c. Malignant tertian malaria
- d. Benign quartan malaria
- e. Malignant quartan malaria

Benign Tertian malaria

12. A 15 year old boy presented with history of dysentery. Along with that he had enlarged liver, right hypochondrial pain and liver abscess. Which parasite is most likely responsible for his condition?

- a. Giardia Lamblia
- b. Entamoeba histolytica
- c. Cryptosporidium
- d. Balantidium coli
- e. Cyclospora

Entamoeba histolytica

Zoroendup

13. A young boy had history of ingesting under cooked fish from a new restaurant and he developed megaloblastic anemia afterwards. Which of the following is the causative agent?

- A. Diphyllobothrium latum
- B. Ascaris lumbricoides
- C. Ankylostoma duodenale
- D. Enterobius vermicularis
- E. Taenia solium

Diphyllobothrium

14. Which of the parasite has dog as the definitive host?

- a. Taenia saginata
- b. Echinococcus granulosus
- c. Echinococcus multilocularis
- d. Trichuris trichuara
- e. Entrobis vermicularis

Zoroendup I think

15. A young boy had history of intermittent fever for last week, associated with dark colored urine. Which specie of Plasmodium is responsible for his disease?

- a. P. falciparum
- b. P. vivax
- c. P. ovale
- d. P. malariae
- e. None of the above

intermittent fever associated with dark urine
P. falciparum

16. A 35 year old adult had an official trip to India. After 3-6 months of returning he developed dry, rough and pigmented lesions on skin along with fever. On physical examination he had hepatosplenomegaly. Skin biopsy revealed LD bodies. What is the most likely diagnosis?

- a. Leishmaniasis
- b. Black water fever
- c. Infantile Kala-azar
- d. Malaria
- e. Amoebiasis

Infantile Kala azar

17. A farmer having cows in his house having history of ingestion of contaminated under cooked beef, developed anorexia and diarrhea. On stool examination, gravid proglottids were present. The most likely organism is:

- a. Taenia solium
- b. Taenia saginata
- c. Echinococcus granulosus
- d. Taenia coli
- e. Diphyllobothrium latum

Zoroendup

Zoroendup

18. A 30 year old farmer having his pruritic papule on his foot is diagnosed with symptoms of pneumonia. Which of the following is the causative agent?

- a. Schistosoma
- b. Ankylostoma
- c. Entrobis vermicularis
- d. Trichuris trichuara
- e. Diphyllobothrium latum

19. An

2500 US

d- Granulor

c- Lymph

Fat ne

Sendup 2020

18. A 30 year old farmer having history of walking bare footed in the fields, developed pruritic papule on his foot ignored by him. After a few days he experienced the signs and symptoms of pneumonia with eosinophilia on blood complete picture. What is the diagnosis?

- a. Schistosoma
- b. Ankylostoma duodenale Ankylostome duodenale ✓
- c. Enterobius vermicularis
- d. Trichuris trichiura
- e. Diphylobothrium latum

19. An eight year old presented with perianal pruritis associated with itching for the last few days. The boy had history of not properly washing his hands before meals. His scotch tape preparation was positive. Which one of the following is the most likely causative agent?

- a. Echinococcus granulosus
- b. Necator americanus
- c. Ankylostoma duodenale
- d. Enterobius vermicularis Enterobius ✓
- e. Diphylobothrium latum

20. Which of the following intestinal parasite has a direct life cycle? at 20 sendup 2020

- a. Giardia lamblia Giardia Lamblia ✓
- b. Taenia saginata
- c. Taenia solium
- d. Schistosoma hematobium
- e. Schistosoma mansoni

9nd

21. Patient receiving corticosteroid treatment for lupus developed headache and fever and when she began to display some memory loss she was brought to her physician by her spouse. Considered in the differential diagnosis was cryptococcal meningitis. Which of the following, if found upon examination of cerebrospinal fluid would support that diagnosis?

- a. Encapsulated yeast cells Encapsulated yeast cells ✓
- b. Hyphae
- c. Intracellular yeast cells
- d. Yeast cells with multiple buds
- e. Yeast cells with a broad base between mother and daughter cells

22. A 40 year old woman sees her primary care physician complaining of an ulcer on her finger. She reported that it started as a red bump. Knowing that her patient was a long-time gardener, the physician asked if that finger had been injured by a thorn. The patient responded that she did not remember about that particular finger but she certainly had received thorn punctures in past weeks. Based on this information, which of the following is the most likely fungal etiology?

- a. Fonsecaea pedrosoi

2. ?
- b. Malassezia furfur
 - c. Microsporum canis
 - d. Sporothrix schenckii
 - e. Stachybotrys chartarum

23. A 57 year old obese, white female with type 1 diabetes mellitus is diagnosed with streptococcal throat infection and prescribed penicillin. A week later she returns complaining of a sore mouth and white patches on the tongue. Your examination confirms the white pseudomembranous lesions. Material from the lesion is obtained and prepared for microscopic examination. Your suspicion of the most likely clinical diagnosis will be confirmed by observation of buccal epithelial cells, leukocytes, and which of the following

- anotida
- a. Gram-positive bacteria
 - b. Gram-negative bacteria
 - c. Hyphae with septa and acute angle branching
 - d. Spherules containing endospores
 - e. Yeast cells, hyphae, and pseudohyphae

Yeast cells, hyphae, and pseudohyphae

24. A normally healthy young man in Arizona was diagnosed with coccidioidomycosis. The most likely route of infection for the etiologic agent is

- a. Aspiration
- b. Cutaneous contact
- c. Ingestion
- d. Inhalation
- e. Implantation

(Dorocidup)

25. 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 health care worker
 - b. A visitor
 - c. Ambient air
 - d. The patient
 - e. The surgeon