Aviation Medicine Quiz

1. Contraction of which of the following muscles is most important for causing forceful expiration?
   (a) Internal intercostals   (b) Diaphragm
   (c) Sternocleidomastoids   (d) Abdominals

2. Which of the following changes tend to cause oedema in tissues?
   (a) Increased pre capillary vascular resistance
   (b) Decreased post capillary vascular resistance
   (c) Increased plasma colloid osmotic pressure
   (d) Increased venous pressure

3. In what layer of the retina is a large store of vitamin A found?
   (a) The choroid,   (b) The pigment layer
   (c) The outer nuclear layer   (d) The inner nuclear layer

4. If the connections are cut between the cortex and the thalamus, which one of the following types of brain waves can still be recorded in the cortex?
   (a) Alpha waves   (b) Beta waves
   (c) Theta waves   (d) Delta waves

5. What probably causes stimulation of the thermal receptors?
   (a) Change in the membrane permeability caused by heat or cold
   (b) Change in the number of protein receptors in the nerve ending
   (c) Change in the viscosity of the fluid surrounding the neuron
   (d) Change in the concentration of sodium ions outside the neuron caused by changes in temperature

6. Which type of cone has a peak absorbancy at a light wavelength of 430 mμ?
   (a) Red cones   (b) Green cones
   (c) Blue cones   (d) None

7. The hormone generally considered to be the major stimulus for enzyme secretion by the pancreas is -
   (a) Cholecystokinin   (b) Secretin
   (c) Trypsin   (d) Gastrin

8. Oxygen therapy has significant value in all the following types of hypoxia except
   (a) Hypoventilation hypoxia   (b) Hypoxia due to pulmonary oedema
   (c) Hypoxia due to decreased haemoglobin in the blood
   (d) Histotoxic hypoxia due to cyanide poisoning

9. A possible cause of sinus bradycardia is-
   (a) Decreased sympathetic outflow   (b) Atropine
   (c) Decreased vagal outflow   (d) All of the above
10. Most common ECG abnormality in CO poisoning is-
   (a) ST depression       (b) QT prolongation
   (c) Extrasystole        (d) AV block

11. A level of carboxyHb which is considered as severe-
   (a) 5-10%             (b) 20-25%
   (c) 40-60%           (d) >70%

12. In vivo marker of active oxygen products of hyperbaric oxygen therapy (HBOT) -
   (a) Increased urine creatinine (b) Decreased serum creatinine
       (c) Increased methyl guanidine (d) Increased serum acetylamine

13. The commonest ejection related injury is known to occur during this phase of ejection:-
   (a) Egress              (b) Windblast
       (c) Parachute opening (d) On landing

14. The commonest cause of unsuccessful ejection is:-
   (a) Ejection at low altitude (b) Delay in decision to eject
       (c) Loss of consciousness (d) None of the above

15. Rule 91 of the aircraft rules 1937, amended in 2009 is responsible for-
   (a) Curbing bird activity
       (b) Curbing poaching around the aerodrome curbing movement of vehicles on the runway
       (c) All the above              (d) None of the above

16. The biggest damage to aircraft is caused by –
   (a) Vultures and kites       (b) Pigeons and eagles
       (c) Bats and owls           (d) All cause equal damage

17. A demonstrable opacity found on a chest X-ray of an NDA aspirant, who gives a history of pulmonary TB treated 03 years ago, will be –
   (a) Rejected initially       (b) Undergoes additional tests (CT, bronchoscopy, ESR, PCR)
       (c) Fitness can be given in an appeal medical board
       (d) All the above

18. GAGAN is a -
   (a) Name of a new aircraft in the IAF inventory
       (b) A satellite used to monitor the IAF air traffic
       (c) Is a regional satellite based augmentation system
       (d) None of the above

19. The competing aircraft in the MRCA were all except –
   (a) Rafale                (b) Gripen
       (c) MiG 35              (d) F-22
20. James Reason, who has published books on motion sickness and Human error is a ____ by profession
   (a) Flight surgeon   (b) Pilot
   (c) Psychiatrist   (d) Psychologist

21. Time required for the impulse to reach from retina to occipital cortex is –
   (a) 60 ms   (b) 80 ms
   (c) 100 ms   (d) 120 ms

22. Thomas Tredici, who classified visual cues to monocular and binocular is a
   (a) WW II bomber pilot   (b) WW II pilot who lost vision in one eye
   (c) Ophthalmologist   (d) Both (a) & (c)

23. The Su-30 MKI has
   (a) Turbojet   (b) Turbofan
   (c) Scram jet   (d) None of the above

24. The greater rate of error is in the following order
   (a) Roll>pitch>yaw   (b) Pitch>roll>yaw
   (c) Yaw>pitch>roll   (d) All cause equal error

25. Sildenafil causes light sensitivity for up to 5 h in 3-11% users. Pilots using this drug can have difficulty in identifying which colour?
   (a) Red   (b) Green
   (c) Blue   (d) All the colours equally

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