Aviation Medicine Quiz

1. The credit for being forerunner of Human Factors goes to:
   (a) Paul Bert  (b) Lilian Gilbert  (c) Lauren Smith  (d) None of the above

2. Boom microphones function by:
   (a) Canceling low frequency noise  (b) Canceling high frequency noise
   (c) Canceling high loudness noise  (d) Not related to frequency or loudness of sound

3. Information in working memory is coded with
   (a) Visual codes  (b) Phonetic codes  (c) Semantic codes  (d) All of the above

4. The maximum acceptable value for the head injury criteria for the duration of impact not exceeding 15 milliseconds for a mid size hybrid III adult dummy is:
   (a) 950  (b) 1000  (c) 1  (d) 1250

5. Breech time delay firing unit:
   (a) Ensures that during ejection, the jettisoned canopy is well clear off the aircraft before the ejection seat ascends the guide rail.
   (b) Causes the auto release of drogue from scissor shackles
   (c) Aids in adjusting the angle between rocket motor and seat pan to compensate for varying weights of occupants
   (d) None of the above.

6. Additional air blast protection system (ABD) during ejection at speeds more than 800-900 Kmph is present in which ejection seat?
   (a) MB MK-10  (b) MB MK-16  (c) K 36 DM Series II  (d) ACES II

7. The refractive power of an aircrew visor at centre point of the optics should not exceed:
   (a) ± 0.01 diopter  (b) ± 0.125 diopter  (c) ± 0.25 diopter  (d) ± 0.5 diopter

8. Critical area of vision of an aircrew visor from the centre point of the optics and primary line of sight is:
   (a) 30° radius field of view  (b) 50° radius field of view
   (c) 60° radius field of view  (d) 70° radius field of view

9. Definition of the Design Eye Position (DEP) with reference to cockpit workspace is:
   (a) Point which offers 15° Over the Nose vision in a seated pilot
   (b) Point in three dimensional space which lies 250 mm below the under surface of the canopy
   (c) Midpoint of the design eye line from which all crew station dimensions are related and referenced
   (d) Point which enables adequate visualization of centre of Head up Display (HUD)

10. Parachute opening shock depends upon:
    (a) Duration of parachute deployment  (b) Altitude of parachute deployment
     (c) Size of the parachute  (d) Shape of the parachute
     (e) All of the above  (f) None of the above
11. ‘Aviator’s Astragalus’ a post impact injury pattern refers to:
   (a) Reversed imprint of rudder pedal pattern on sole of the pilot’s shoes
   (b) Fracture of the talar neck in pilot’s of aircraft with toe brakes.
   (c) Tibial shaft fracture in helicopter pilots
   (d) Femoral fracture due to knee impacting with instrument panel.

12. The weight of a helmet worn in aircraft frequently exposed to sustained accelerations or vibrations ideally should not exceed:
   (a) 2 Kg      (b) 2.5 Kg      (c) 1.3 Kg      (d) 1.7 Kg

13. Luminous transmittance of Class I visor throughout the critical area of vision should not be:
   (a) less than 60%  (b) less than 70%  (c) less than 85%  (d) less than 90%

14. Visual acuity in scotopic vision is:
   (a) 6/18      (b) 6/24      (c) 6/36      (d) 6/60

15. Automatic Brightness Control (ABC) is a feature of which generation of NVG?
   (a) Gen I      (b) Gen 2      (c) Gen 2+     (d) None of the above

16. The distance of transmission of Komar 2M radio beacon is:
   (a) 25-100 Km  (b) 10-20 Km  (c) 30-50Km  (d) 500m-15Km

17. According to the Dennis’ three column theory, unstable fracture of vertebral column involves:
   (a) Anterior column  (b) Posterior column  (c) Middle column  (d) Anterior & Posterior column

18. Notch Filter is present in
   (a) Gen1 NVG  (b) Gen 2 NVG  (c) Gen 2+ NVG  (d) Gen 3 NVG

19. First person to eject from an aircraft was:
   (a) Helmut Schemk  (b) Mark Schulman  (c) Dennis Brown  (d) D Ivantowa

20. With the eyes of the pilot placed at Design Eye Point (DEP), the Zone 2 reach in a cockpit is defined as that area which can be reached by the pilot with his:
   (a) Restraint harness locked without stretch of shoulder and arms
   (b) Restraint harness locked with maximum stretch of shoulder and arms
   (c) Restraint harness unlocked without stretch of shoulder and arms
   (d) Restraint harness unlocked with stretch of shoulder and arms

21. Which of the following Anthropomorphic test dummies is not used for aircraft ejection seat evaluation?
   (a) Aerospace dummy  (b) Hybrid III dummy  (c) BIOSID dummy  (d) ADAM dummy

22. Centre of gravity of head lies:
   (a) 2 inches in front of atlanto-occipital joint  (b) In the center of Foramen Oval
   (c) 92 inches in front of C2 vertebra  (d) At the midpoint of Manubrium Sternum
23. NASA-TLX gives weighted average of ratings on:
   (a) Mental and Physical demands
   (b) Temporal demands and own performance
   (c) Effort and frustration
   (d) All of the above

24. As the noise levels at ear increase, talking levels increase. This effect is known as:
   (a) Lombard effect
   (b) Bert effect
   (c) Boom effect
   (d) None of the above

25. The type of glare produced by reflected image of a map placed on instrument panel in the cockpit, reducing the contrast of outside world images is:
   (a) Discomfort glare
   (b) Veiling disability glare
   (c) Dazzle disability glare
   (d) Scotomatic disability glare

Compiled by

Wg Cdr NK Tripathy /Graded Specialist (Aviation Medicine)/

Maj Stuti Mishra (Senior Trainee in Aviation Medicine)