

Airport

- Q.1 The runway orientation is made so that landing and take off are
 (a) against the wind direction
 (b) along the wind direction
 (c) perpendicular to wind direction
 (d) none of these
- Q.2 The depressions and undulations in the pavement, are caused due to
 (a) improper compaction of subgrade
 (b) impact of heavy wheel loads
 (c) punching effect
 (d) all the above.
- Q.3 Pick up the correct statement from the following:
 (a) The speed of the aircraft relative to the ground, is called cruising speed
 (b) The speed of the aircraft relative to wind, is called air speed
 (c) When wind is blowing the direction of the flight, air speed is less than cruising speed
 (d) All the above.
- Q.4 Airport elevation is the reduced level above M.S.L. of
 (a) control tower
 (b) highest point of the landing area
 (c) lowest point of the landing area
 (d) none of these.
- Q.5 According to I.C.A.O. the recommended length of airports is decided on
 (a) sea level elevation
 (b) standard sea level temperature (15°C)
 (c) effective gradient percentage
 (d) All the above
- Q.6 Pick up the correct statement from the following:
 (a) The basic length of a runway is increased at a rate of 7% per 300 m of elevation of M.S.L.
- (b) The standard temperature at the site is obtained by reducing the standard sea level temperature of 15°C at the rate of 6.5°C per 1000 m rise in elevation
 (c) The aerodrome reference temperature is the monthly mean of the mean daily temperature for the hottest month of the year
 (d) All the above.
- Q.7 The meteorological condition which influences the size and location of an airport is
 (a) atmosphere pressure
 (b) air density
 (c) reduced level
 (d) wind direction
- Q.8 The thickness design of the pavement, is decided on the load carried by
 (a) main gears (b) nose wheel
 (c) tail wheel (d) all the above
- Q.9 Beaufort scale is used to determine
 (a) strength of winds
 (b) direction of winds
 (c) height of aircrafts
 (d) none of these
- Q.10 Wing loading of an aircraft is
 (a) load of the wings
 (b) $\frac{\text{gross total weight of the aircraft}}{\text{load of wings}}$
 (c) $\frac{\text{gross total weight of the aircraft}}{\text{wing area}}$
 (d) $\frac{\text{gross total weight of the aircraft}}{\text{total available H.P. of engines}}$
- Q.11 Pick up the correct statement from the following:
 (a) The centre line of the approach area coincides with that of the runway

- (b) Approach areas are measured in horizontal surfaces
 (c) The imaginary inclined plane which is directly above the approach area is called approach surface
 (d) All the above

- Q.12 The best direction of a runway is along the direction of
 (a) longest line on wind rose diagram
 (b) shortest line on the wind rose diagram
 (c) line clear of wind rose diagram
 (d) None of these

- Q.13 For the taxiways, the following statement is true
 (a) The maximum longitudinal grade is 3%
 (b) The permissible rate of change of grade is 1%
 (c) The permissible transverse grade is 1.5%
 (d) All the above

- Q.14 According to I.C.A.O. all markings on the runways are painted white and on taxiways

- (a) black (b) red
 (c) yellow (d) green

- Q.15 The runway length after correcting for elevation and temperature is 2845 m. If the effective gradient on runway is 0.5 percent then the revised runway length will be

- (a) 2845 m (b) 2910 m.
 (c) 3030 m (d) 3130 m

- Q.16 The length of runway under standard conditions is 2000 m. The elevation of airport site is 300 m. Its reference temperature is 33.05°C . If the runway is to be constructed with an effective gradient of 0.25 percent, the corrected runway length will be
 (a) 2500 m (b) 2600 m
 (c) 2700 m (d) 2800 m

Answers Airport

1. (a) 2. (d) 3. (d) 4. (b) 5. (d) 6. (d) 7. (d) 8. (a) 9. (a) 10. (c)
 11. (d) 12. (a) 13. (d) 14. (c) 15. (d) 16. (c)

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15. (d)
 Revised runway length

$$= 2845 + \frac{20}{100} \times 0.5 \times 2845$$

$$= 3129.5 \approx 3130 \text{ m}$$

16. (c)
 Standard temperature

$$= 15^{\circ} - 0.0065 \times 300 = 13.05^{\circ}$$

$$\Rightarrow \text{Difference in temperature}$$

$$= \Delta T = 33.05^{\circ}\text{C} - 13.05^{\circ}\text{C} = 20^{\circ}\text{C}$$
 The corrected runway length

$$= 2000 (1.07 \times 1.2 \times 1.05)$$

$$= 2696.4 \text{ m} \approx 2700 \text{ m}$$