

**VSC SELECTION EXAM-I**

**TIME: 03 HOURS**

**TOTAL MARKS-150**

**MCQs**

**(20X1=20 Marks)**

1. Cockpit windshields, doors and overhead windows are transparent surfaces made of.....  
(a) 2cm anti UV GE tinted lexan (b) 2mm UV GE tinted lexan  
(c) 2cm anti UV GE tinted lexan (d) 2mm anti UV GE tinted lexan
2. Sink rate at 50 Knots is.....  
(a) 400 feet per minute (b) 440 feet per minute  
(c) 410 feet per minute (d) 420 feet per minute
3. AFFF is synthetic foam having.....  
(a) Low viscosity (b) High viscosity  
(c) Zero viscosity (d) Partial viscosity
4. Surplus oil from accumulated at the crank case is forced back to oil tank by....  
(a) Blow by gases (b) Blow by air  
(c) Compressor (d) Oil pump
5. After landing, aircraft must undergo series of checks to verify \_\_\_\_\_  
(a) Air Speed (b) Air Quality (c) Engine Quality (d) Air Worthiness
6. In stall recovery procedure, the control stick is moved forward to reduce  
(a) Angle of Refraction (b) Angle of Incidence  
(c) Angle of Occurrence (d) Angle of Attack
7. QNH is measured in .....  
(a) hPa (b) GPa (c) Millimeter (d) Kg/cm<sup>2</sup>
- 8- During Downwind of Microlight aircraft the parameter of speed and height will be.....  
(a) Ht 700' / Sp 76 kts (b) Ht 600' / Sp 76 kts  
(c) Ht 700' / Sp 70 kts (d) Ht 760' / Sp 70 kts
9. A/C batteries is normally charged by DC generators driven by.....  
(a) Air craft (b) Air craft propeller  
(c) A/C engine (d) None of these
10. Recommended fuel grade of VIRUS SW-80 aircraft is....  
(a) Unleaded super grade 93 (b) Leaded super grade 93  
(c) Unleaded super grade 39 (d) None of the above
11. ....is to assist the pilots to make an approach for landing in poor visibility or in night.  
(a) Hypoxia (b) Signal Square  
(c) Aerodrome Lighting (d) Approach Lighting

12. According to Bernoulli's theorem static pressure decreases as the velocity  
 (a) Decreases (b) Neutral (c) Increases (d) None of these
13. 16 Air Vice Marshal of Indian Air Force is equivalent to ..... rank of Indian army.  
 (a) Colonel (b) Brigadier (c) Major General (d) Captain
14. The primary responsibility of Indian ..... is to secure Indian airspace and to conduct aerial warfare during a conflict.  
 (a) Air Force (b) Army (c) Navy (d) NSG
15. S-400 has operational altitude upto ..... km.  
 (a) 185 (b) 285 (c) 85 (d) 155
16. During the ..... War the Prime Minister of India was Atal Bihari Vajpayee  
 (a) 1999 (b) 1971 (c) 1962 (d) 1965
17. The operating cycle (pressure / volume cycle) of a basic aero-engine is called  
 (a) Combustion Cycle (b) Compression cycle  
 (c) Brayton cycle (d) Induction cycle
18. Air brakes are..... Controls  
 (a) Primary (b) Secondary  
 (c) Auxiliary (d) None of these
19. A Component converts the turbine RPM to an appropriate level for the propeller is called:  
 (a) Turbine (b) Single Shaft  
 (c) Free Turbine (d) Reduction gear box
20. Sir George Caley built helicopter model in  
 (a) 1796 (b) 1797 (c) 1798 (d) 1799

### **FILL IN THE BLANKS**

**(20X1=20 Marks)**

21. DFC stands for \_\_\_\_\_
22. The name of the party of Seikh Mujibur Rehman was \_\_\_\_\_
23. In Piston engine air intake assists in \_\_\_\_\_
24. Most gliders are equipped with \_\_\_\_\_ on the wings in order to adjust their angle of descent during approach to landing.
25. A raised aileron reduces lift on that wing and a lowered one \_\_\_\_\_ lift.
26. General airplane lift equation is \_\_\_\_\_
27. The depth of \_\_\_\_\_ will normally be insignificant, and will in any case never exceed 500 ft.

28. Distance between shoulders in Runway Marking is \_\_\_\_\_
29. In RT procedures and phraseology the letter Q is said \_\_\_\_\_
30. \_\_\_\_\_ technique, that is, to close the mouth, hold the nose and blow gently.
31. Recommended lateral displacement for downwind leg is \_\_\_\_\_.
32. Care must be taken not to exceed \_\_\_\_\_ during recovery from stall with Flaps 15° / Flaps 25°.
33. During Engine warm, Engine throttle to be set to \_\_\_\_\_, till oil temperature reaches \_\_\_\_\_.
34. Maximum wind speed for parking outdoors with tie down is \_\_\_\_\_.
35. Manifold Pressure (MAP) displayed in \_\_\_\_\_ of Hg, \_\_\_\_\_ warning.
36. Battery of ML aircraft is capable of operation within a temperature range of \_\_\_\_\_ Celcius, with a maximum operating altitude of \_\_\_\_\_.
37. AFFF compound for extinction of hydrocarbon and polar solvent fires, the full form of AFFF is \_\_\_\_\_.
38. Firewall is reinforced by \_\_\_\_\_ using \_\_\_\_\_.
39. Fuel flow Display available only when more than \_\_\_\_ fuel is available in tank.
40. Minimum height to commence the manoeuvre of stall is \_\_\_\_\_ ft AGL.

**WRITE THE SHORT NOTE ON FOLLOWING**

**(20x5=100 Marks)**

41. The composition of dry air by volume is as
42. Layers of Atmosphere are...
43. Classification of Clouds
44. What are the types of Precipitation?
45. Various types of wings
46. What is Artificial Horizon?
47. Basic tools of Aeromodelling?
48. What are the Specifications of International Standard Atmosphere?
49. Write Objectives of Air Traffic Services.
50. Write Short Note on Operation Safed Sagar?
51. What is Futter, Explain it.
52. What do you mean by Spin in aircraft and how to recover from it?
53. Explain Descent Procedure.

54. Write down the Limitation of Aircraft?
55. Write down the final approach checks?
56. What is stall, Write down Internal check before Stall?
57. What do you understand with Rough engine operation or engine failure in flight?
58. How will you come to know that Electric Fuel Pump has failed during engine operation and what action you take to recover the engine?
59. What is cold start; explain the starting procedure of engine?
60. After entering the cockpit what procedure will follow before engine start?

**TRUE / FALSE**

**(10x1=10 Marks)**

61. During War Time, Aircraft recognition helps the MOP (mobile observation post) to identify the Aircraft as friend or foe. It also helps to know the capability of the aircraft by identifying its type.
62. Gas turbine engines are divided into two main classes. They are Turbo jet engine and Turbo Fan engine
63. The construction/building of static models is one of the main events in all India level competitions like AIVSC and RDC.
64. Air Traffic Control officers work under the directions of Chief Engineering Officer.
65. Control surfaces in Microlite A/C are operated electrically.
66. Mountains and hills are not used as valuable land mark for Navigation.
67. The objective of Lubrication system is to wash away the burs released while sliding the parts when they are moving.
68. Parasite drag is produced in the flight by Fixed under carriage
69. To control YAW rudder is moved with help of Control stick.
70. Static aero models are miniature replicas of original aircrafts.