

VSC- IGC PAPER– 2019 (SD/SW)

Total Marks: 150
Duration : 2 Hours

GENERAL SUBJECT QUESTIONS :-

FILL IN THE BLANKS

10 X 1 = 10

1. The degree of transparency of atmosphere is called _____.
2. The first Aircraft Autopilot was developed by _____.
3. One of the earliest attempt to construct a flying machine was made by _____.
4. Minute water drops falling from clouds is called _____.
5. Mixture of rain and snow is called _____.
6. It is an accommodation provided for pilot is known as _____.
7. The surface which is at the rear of the tail plane is called _____.
8. _____ supplies the desired high voltage current to the spark plug.
9. The primary role of Indian Air Force is _____.
10. Left side of an aircraft as seen by a pilot looking forward is known as _____.

TRUE OR FALSE

10 X 1 = 10

1. Tail is a type of tail plane. ()
2. Retractable under carriage can be retracted after the aircraft airborne. ()
3. Streamline flow is the smooth un-interrupted flow of air around an object. ()
4. A generator works on the principle of Fleming Right hand rule. ()
5. Slats are small auxiliary surfaces placed in front of the leading edge of main plane. ()
6. A tube, which has an inlet portion gradually narrowing than throat followed outlet which widens gradually is called venturi tube. ()
7. The forward thrust produced by any engine is as per Newton's first law. ()
8. Airmanship does not help to inculcate the sense of discipline amongst pilots and other crew members. ()
9. Elevator is a control surface which gives pitching movement to aircraft. ()
10. Angle of incidence is the angle between the chord line and the longitudinal axis. ()

SHORT ANSWERS

5 x 2 = 10

Q.1 What is Fly-by-optics? (Pg no 76)

Q.2 What is air Navigation? (Pg no 150)

Q.3 Explain Main plane (Pg no 204)

Q. 4 What are the advantages of tricycle landing gear? (Pg no 212)

Q.5 Write short note on UAV. (Pg no 76)

LONG ANSWERS

4 X 5 = 20

Q.1 Explain types of Tail plane. (Pg no 206)

Q.2 Explain external and internal combustion engine. (Pg no 184)

Q.3 Write various types of UAVs and explain their role (Pg no 76)

Q-4: Define the following. (Pg no 86)

Ans: (a) Aerofoil

(b) Chord line

(c) Chord length

(d)Angle of attack

(e)Lift

(f)Drag

VIRUS SW - 80

Fill In the blanks

10 X 1 = 10 Marks

- 1) Max Speed V FE 15 (Flaps 15°) is _____.
2. Engine is required to be warmed up, at not more than _____ RPM.
- 3) If the pressure value drops below 2.2 PSI, it turns red with _____ warning.
4. Difference in drop on both magnetos not more than _____ **115 rpm**
- 5) Maximum coolant Temperature (Red) _____.
- 6) Prior to descent, obtain RT permission from the _____ and confirm rejoin instructions. .
- 7) _____ combines indication of vertical speed in both meters per second and feet per minute.
- 8) Cruise Air Speed of Virus AC is _____
- 9) Best Climb rate at 100 Kts is _____
- 10) ASI indicates speed in _____

True or false

10 X 1 = 10 Marks

1. Stall speed of the aircraft is at 15 degrees is 45 kts ()
2. Thickness of the cockpit windshield is 2mm ()
3. Engine doesn't comprise of a cooling fan ()
4. Cruise airspeed is 112kts ()
5. Horizontal stabilizer contains Nav/ strobe lights for condition ()
6. Authorization Book filled in and to be signed before proceeding to the aircraft . ()
7. Elevator trimming mechanism is electrically operated. ()
8. Rear wheel brakes are pneumatically operated. ()
9. Lateral movement of the dual flight control stick effects the aileron movement. ()
10. Propeller is made up of two blade fixed pitch design. ()

SHORT ANSWERS

5 x 2 = 10

Q1. Write a short note on wheel brake system of AC Virus ?

Ans.

Q2. Explain engine warm up procedure.

Q3. Write any 3 prohibitions for flying virus aircraft?

Q4. Write about pitot static system?

Q5. Draw the circuit procedure.

LONG ANSWERS

4 X 5 = 20

Q1. Explain the Cockpit of Virus briefly ?

Ans.

Q2. Write step by step procedure of Pre-flight cockpit inspection ?

Ans.

Q3. Write procedure of Magneto drop check ?

Ans. -

Q4. Write a short Note on Taxying procedure?

Ans.

HEALTH AND HYGINE

TRUE OR FALSE:**10 X 1 = 10**

1. Courage is one of the main element of good health. ()
2. Droplet infection can be prevented by use of mask ()
3. If the burn is chemical, let water from a pipe or hose flow freely on the burn so that the chemical flows off. ()
4. In case of snake bite wash with soap and water ()
5. Punctured wound is caused by sharp instrument. ()
6. Always put the knot on bandages away from wound. ()
7. Compound fracture is a type of fracture. ()
8. In simple fracture broken bone is covered with skin. ()
9. Gyan mudra is not an asana. ()
10. There are 13 stages in Surya Namaskar. ()

FILL IN THE BLANKS:**10 X 1 = 10**

1. Germs moves from infected person to healthy person through blood sucking insects known as _____.
2. In _____ borne disease, germs are transmitted through the agency of animals by drinking milk or through the agency of insects.
3. Injection TT is given for_____ disease.
4. Heat can be used in two ways for sterilization i.e. moist heat & _____
5. Radiations include ionizing radiations like X-rays, gamma, Beta and _____
6. The average weight of female heart is _____ gms.
7. _____ is the most important organ of blood circulation.
8. Excretion is the process by which _____ are removed out of the body.
9. Central Nervous system consists of _____ and spinal cord.
10. Each side of heart is again divided into two part i.e. _____ and Ventricles.

SHORT NOTES**6X 5 = 30**

- Q1. What are water borne disease? (Pg 252)

Q2. Define wound and write the classification of wounds. (Pg no 272)

Q3. Write the basic procedure of First Aid Treatment. (Pg no 258)

Q4. Explain any two Asanas in yoga. (Pg no 283 & 286)

Q5. Write methods to follow for prevention of droplet infection? (Pg no 253)

Q6. Explain the importance of mental health. (Pg no 249)

