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Bank: (Instrument Rating)

Airman Knowledge Test Question Bank

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1. PLT036 IRA

What information does a Mach meter present?

- A) The ratio of aircraft true airspeed to the speed of sound.
- B) The ratio of aircraft indicated airspeed to the speed of sound.
- C) The ratio of aircraft equivalent airspeed, corrected for installation error, to the speed of sound.

2. PLT337 IRA

If while in level flight, it becomes necessary to use an alternate source of static pressure vented inside the airplane, which of the following variations in instrument indications should the pilot expect?

- A) The altimeter will read lower than normal, airspeed lower than normal, and the VSI will momentarily show a descent.
- B) The altimeter will read higher than normal, airspeed greater than normal, and the VSI will momentarily show a climb.
- C) The altimeter will read lower than normal, airspeed greater than normal, and the VSI will momentarily show a climb and then a descent.

3. PLT406 IRA

A pilot is making an ILS approach and is past the OM to a runway which has a VASI. What action should the pilot take if an electronic glide slope malfunction occurs and the pilot has the VASI in sight?

- A) The pilot should inform ATC of the malfunction and then descend immediately to the localizer DH and make a localizer approach.
- B) The pilot may continue the approach and use the VASI glide slope in place of the electronic glide slope.
- C) The pilot must request an LOC approach, and may descend below the VASI at the pilot's discretion.

4. PLT132 IRA

When an aircraft is accelerated, some attitude indicators will precess and incorrectly indicate a

- A) climb.
- B) descent.
- C) right turn.

5. PLT185 IRA

If a half standard-rate turn is maintained, how long will it take to turn 360°?

- A) 1 minute.
- B) 2 minutes.
- C) 4 minutes.

6. PLT298 IRA

What altitude may a pilot select upon receiving a VFR on Top clearance?

- A) Any altitude at least 1,000 feet above the meteorological condition.
- B) Any appropriate VFR altitude at or above the MEA in VFR weather conditions.
- C) Any VFR altitude appropriate for the direction of flight at least 1,000 feet above the meteorological condition.

7. PLT012 IRA

(Refer to figures 21, 22, and 24.) What fuel would be consumed on the flight between Grand Junction Co. and Durango, Co. if the average fuel consumption is 17.5 GPH.

- A) 17 gallons.
- B) 20 gallons.
- C) 25 gallons.

8. PLT100 IRA

On what frequency should you obtain En Route Flight Advisory Service below FL 180?

- A) 122.1T/112.8R.
- B) 123.6.
- C) 122.0.

9. PLT058 IRA

(Refer to figure 91.) What is the minimum crossing altitude at DBS VORTAC for a northbound IFR flight on V257?

- A) 7,500 feet.
- B) 8,600 feet.
- C) 11,100 feet.

10. PLT292 IRA

(Refer to figure 118.) During the ILS RWY 12L procedure at DSM, what altitude minimum applies if the glide slope becomes inoperative?

- A) 1,420 feet.
- B) 1,360 feet.
- C) 1,121 feet.

11. PLT083 IRA

(Refer to figure 130.) What are the restrictions regarding circle to land procedures for LDA RWY/GS 6 approach at Roanoke Regional?

- A) Circling to runway 24 not authorized.
- B) Circling not authorized NW of RWY 6 24.
- C) Visibility increased 1/2 mile for circling approach.

12. PLT083 IRA

(Refer to figure 123.) The symbol on the plan view of the VOR/DME-A procedure at 7D3 represents a minimum safe sector altitude within 25 NM of

- A) DEANI intersection.
- B) White Cloud VORTAC.
- C) Baldwin Municipal Airport.

13. PLT083 IRA

(Refer to figure 49.) When conducting a missed approach from the LOC/DME RWY 21 approach at PDX, what is the Minimum Safe Altitude (MSA) while maneuvering between the runway and BTG VORTAC?

- A) 4,000 feet MSL.
- B) 3,400 feet MSL.

C) 6,100 feet MSL.

14. PLT291 IRA

`WND` in the categorical outlook in the Aviation Area Forecast means that the wind during that period is forecast to be

- A) sustained surface wind speed of 6 knots or greater.
- B) sustained surface wind speed of 15 knots or greater.
- C) sustained surface wind speed of 20 knots or greater.

15. PLT226 IRA

In what localities is advection fog most likely to occur?

- A) Coastal areas.
- B) Mountain slopes.
- C) Level inland areas.

16. PLT226 IRA

Fog is usually prevalent in industrial areas because of

- A) atmospheric stabilization around cities.
- B) an abundance of condensation nuclei from combustion products.
- C) increased temperatures due to industrial heating.

17. PLT226 IRA

Which weather condition can be expected when moist air flows from a relatively warm surface to a colder surface?

- A) Increased visibility.
- B) Convective turbulence due to surface heating.
- C) Fog.

18. PLT248 IRA

What force causes a helicopter to turn?

- A) Rudder pressure or force around the vertical axis.
- B) Vertical lift component.
- C) Horizontal lift component.

19. PLT166 IRA

If you are departing from an airport where you cannot obtain an altimeter setting, you should set your altimeter

- A) on 29.92 inches Hg.
- B) on the current airport barometric pressure, if known.
- C) to the airport elevation.

20. PLT185 IRA

Which instrument provides the most pertinent information (primary) for bank control in straight-and-level flight?

- A) Turn and slip indicator.
- B) Attitude indicator.
- C) Heading indicator.

21. PLT185 IRA

What is the third fundamental skill in attitude instrument flying?

- A) Instrument cross-check.
- B) Power control.

C) Aircraft control.

22. PLT185 IRA

Which instrument is considered primary for power as the airspeed reaches the desired value during change of airspeed in a level turn?

- A) Airspeed indicator.
- B) Attitude indicator.
- C) Altimeter.

23. PLT278 IRA

Errors in both pitch and bank indication on an attitude indicator are usually at a maximum as the aircraft rolls out of a

- A) 180° turn.
- B) 270° turn.
- C) 360° turn.

24. PLT185 IRA

Which instrument indicates the quality of a turn?

- A) Attitude indicator.
- B) Heading indicator or magnetic compass.
- C) Ball of the turn coordinator.

25. PLT052 IRA

(Refer to figure 85.) What route should you take if cleared for the Washoe Two Departure and your assigned route is V6?

- A) Climb on the LOC south course to WAGGE where you will be vectored to V6.
- B) Climb on the LOC south course to cross WAGGE at 9,000, turn left and fly direct to FMG VORTAC and cross at or above 10,000, and proceed on FMG R 241.
- C) Climb on the LOC south course to WAGGE, turn left and fly direct to FMG VORTAC. If at 10,000 turn left and proceed on FMG R 241; if not at 10,000 enter depicted holding pattern and climb to 10,000 before proceeding on FMG R 241.

26. PLT091 IRA

(Refer to figure 105.) If the magnetic heading shown for aircraft 5 is maintained, which ADF illustration would indicate the aircraft is on the 210° magnetic bearing FROM the station?

- A) 2.
- B) 3.
- C) 4.

27. PLT049 IRA

(Refer to figures 60A and 61.) What is your position relative to the PLATS intersection, glide slope, and the localizer course?

- A) Past PLATS, below the glide slope, and right of the localizer course.
- B) Approaching PLATS, above the glide slope, and left of the localizer course.
- C) Past PLATS, above the glide slope, and right of the localizer course.

28. PLT420 IRA

All helicopters are considered to be in which approach category for a helicopter IAP?

- A) A.
- B) A or B, depending upon weight.
- C) B.

29. PLT382 IRA

Upon what maximum airspeed is the instrument approach criteria for a helicopter based?

- A) 100 knots.
- B) 90 knots.
- C) 80 knots.

30. PLT382 IRA

(Refer to figure 128.) What is the helicopter MDA for a straight in VOR RWY 36 approach at Price/Carbon County Airport (VOR only)?

- A) 6,090 feet MSL.
- B) 500 feet MSL.
- C) 6,400 feet MSL.

31. PLT291 IRA

Area forecasts generally include a forecast period of 18 hours and cover a geographical

- A) terminal area.
- B) area less than 3,000 square miles.
- C) area the size of several states.

32. PLT026 IRA

A ceiling is defined as the height of the

- A) highest layer of clouds or obscuring phenomena aloft that covers over 6/10 of the sky.
- B) lowest layer of clouds that contributed to the overall overcast.
- C) lowest layer of clouds or obscuring phenomena aloft that is reported as broken or overcast.

33. PLT066 IRA

(Refer to figure 9.) What type of thunderstorm activity is expected over Montana on April 4th at 0800Z?

- A) General.
- B) None.
- C) A slight risk of severe thunderstorms.

34. PLT495 IRA

Which thunderstorms generally produce the most severe conditions, such as heavy hail and destructive winds?

- A) Warm front.
- B) Squall line.
- C) Air mass.

35. PLT492 IRA

If the air temperature is +8 °C at an elevation of 1,350 feet and a standard (average) temperature lapse rate exists, what will be the approximate freezing level?

- A) 3,350 feet MSL.
- B) 5,350 feet MSL.
- C) 9,350 feet MSL.

36. PLT495 IRA

What are the requirements for the formation of a thunderstorm?

- A) A cumulus cloud with sufficient moisture.
- B) A cumulus cloud with sufficient moisture and an inverted lapse rate.
- C) Sufficient moisture, an unstable lapse rate, and a lifting action.

37. PLT495 IRA

Which weather phenomenon is always associated with a thunderstorm?

- A) Lightning.
- B) Heavy rain showers.
- C) Supercooled raindrops.

38. PLT518 IRA

What is an important characteristic of wind shear?

- A) It is an atmospheric condition that is associated exclusively with zones of convergence.
- B) The Coriolis phenomenon in both high and low level air masses is the principal generating force.
- C) It is an atmospheric condition that may be associated with a low level temperature inversion, a jet stream, or a frontal zone.

39. PLT292 IRA

What does the absence of the procedure turn barb on the plan view on an approach chart indicate?

- A) A procedure turn is not authorized.
- B) Teardrop-type procedure turn is authorized.
- C) Racetrack-type procedure turn is authorized.

40. PLT292 IRA

What are the requirements for a contact approach to an airport that has an approved IAP, if the pilot is on an instrument flight plan and clear of clouds?

- A) The controller must determine that the pilot can see the airport at the altitude flown and can remain clear of clouds.
- B) The pilot must agree to the approach when given by ATC and the controller must have determined that the visibility was at least 1 mile and be reasonably sure the pilot can remain clear of clouds.
- C) The pilot must request the approach, have at least 1 mile visibility, and be reasonably sure of remaining clear of clouds.

41. PLT166 IRA

What is the primary pitch instrument when establishing a constant altitude standard-rate turn?

- A) Altimeter.
- B) VSI.
- C) Airspeed indicator.

42. PLT322 IRA

For operations off established airways at 17,000 feet MSL in the contiguous U.S., (H) Class VORTAC facilities used to define a direct route of flight should be no farther apart than

- A) 75 NM.
- B) 100 NM.
- C) 200 NM.

43. PLT091 IRA

A VOR receiver with normal five-dot course sensitivity shows a three-dot deflection at 30 NM from the station. The aircraft would be displaced approximately how far from the course centerline?

- A) 2 NM.
- B) 3 NM.
- C) 5 NM.

44. PLT276 IRA

What angular deviation from a VOR course centerline is represented by a full scale deflection of the CDI?

- A) 4°.

- B) 5°.
- C) 10°.

45. PLT322 IRA

When using VOR for navigation, which of the following should be considered as station passage?

- A) The first movement of the CDI as the airplane enters the zone of confusion.
- B) The moment the TO FROM indicator becomes blank.
- C) The first positive, complete reversal of the TO FROM indicator.

46. PLT363 IRA

When using VOT to make a VOR receiver check, the CDI should be centered and the OBS should indicate that the aircraft is on the

- A) 090 radial.
- B) 180 radial.
- C) 360 radial.

47. PLT300 IRA

Which is the maximum tolerance for the VOR indication when the CDI is centered and the aircraft is directly over the airborne checkpoint?

- A) Plus or minus 6° of the designated radial.
- B) Plus or minus 4° of the designated radial.
- C) Plus 6° or minus 4° of the designated radial.

48. PLT102 IRA

(Refer to figures 41 and 41A.) On which heading should you plan to depart CREEK intersection?

- A) 010°.
- B) 040°.
- C) 350°.

49. PLT288 IRA

Which primary source should be used to obtain forecast weather information at your destination for the planned ETA?

- A) Area Forecast.
- B) Radar Summary and Weather Depiction Charts.
- C) Terminal Aerodrome Forecast (TAF).

50. PLT061 IRA

Interpret this PIREP.

MRB UA/OV MRB/TM1430/FL060/TPC182/SK BKN BL/WX RA/TB MDT.

- A) Ceiling 6,000 feet intermittently below moderate thundershowers; turbulence increasing westward.
- B) FL 60,000, intermittently below clouds; moderate rain, turbulence increasing with the wind.
- C) At 6,000 feet; between layers; moderate turbulence; moderate rain.

51. PLT173 IRA

Stability can be determined from which measurement of the atmosphere?

- A) Low level winds.
- B) Ambient lapse rate.
- C) Atmospheric pressure.

52. PLT518 IRA

What effect will a change in wind direction have upon maintaining a 3° glide slope at a constant true airspeed?

- A) When ground speed decreases, rate of descent must increase.
- B) When ground speed increases, rate of descent must increase.
- C) Rate of descent must be constant to remain on the glide slope.

53. PLT052 IRA

(Refer to figure 77.) At which minimum altitude should you cross the STAKK intersection?

- A) 6,500 feet MSL.
- B) 1,400 feet MSL.
- C) 10,200 feet MSL.

54. PLT507 IRA

(Refer to figure 76.) Which indication would be an acceptable accuracy check of both VOR receivers when the aircraft is located on the VOR receiver checkpoint at the Helena Regional Airport?

- A) A.
- B) B.
- C) C.

55. PLT058 IRA

(Refer to figure 87.) Which VHF frequencies, other than 121.5, can be used to receive De Ridder FSS in the Lake Charles area?

- A) 122.1, 126.4.
- B) 123.6, 122.65.
- C) 122.2, 122.3.

56. PLT083 IRA

(Refer to figure 120.) The symbol on the plan view of the ILS RWY 35R procedure at DEN represents a minimum safe sector altitude within 25 NM of

- A) Denver VORTAC.
- B) Gandi outer marker.
- C) Denver/Stapleton International Airport.

57. PLT102 IRA

(Refer to figures 35 and 35A.) At which point does the BUJ.BUJ3 arrival begin?

- A) At the TXK VORTAC.
- B) At BOGAR intersection.
- C) At the BUJ VORTAC.

58. PLT281 IRA

In which publication can the VOR receiver ground checkpoint(s) for a particular airport be found?

- A) Airman's Information Manual.
- B) En Route Low Altitude Chart.
- C) Airport/Facility Directory.

59. PLT442 IRA

An instrument rated pilot, who has not logged any instrument time in 1 year or more, cannot serve as pilot in command under IFR, unless the pilot

- A) completes the required 6 hours and six approaches, followed by an instrument proficiency check given by an FAA-designated examiner.

B) passes an instrument proficiency check in the category of aircraft involved, given by an approved FAA examiner, instrument instructor, or FAA inspector.

C) passes an instrument proficiency check in the category of aircraft involved, followed by 6 hours and six instrument approaches, 3 of those hours in the category of aircraft involved.

60. PLT105 IRA

Which is true regarding the use of airborne weather-avoidance radar for the recognition of certain weather conditions?

A) The radarscope provides no assurance of avoiding instrument weather conditions.

B) The avoidance of hail is assured when flying between and just clear of the most intense echoes.

C) The clear area between intense echoes indicates that visual sighting of storms can be maintained when flying between the echoes.

61. PLT118 IRA

(Refer to figure 143.) When the system is in the free gyro mode, depressing the clockwise manual heading drive button will rotate the remote indicating compass card to the

A) right to eliminate left compass card error.

B) right to eliminate right compass card error.

C) left to eliminate left compass card error.

62. PLT224 IRA

When may a pilot file a composite flight plan?

A) When requested or advised by ATC.

B) Any time a portion of the flight will be VFR.

C) Any time a landing is planned at an intermediate airport.

63. PLT361 IRA

What is a difference between an SDF and an LDA facility?

A) The SDF course width is either 6° or 12° while the LDA course width is approximately 5°.

B) The SDF course has no glide slope guidance while the LDA does.

C) The SDF has no marker beacons while the LDA has at least an OM.

64. PLT353 IRA

(Refer to figure 8.) What weather conditions are depicted in the area indicated by arrow A on the Radar Summary Chart?

A) Moderate to strong echoes; echo tops 30,000 feet MSL; line movement toward the northwest.

B) Weak to moderate echoes; average echo bases 30,000 feet MSL; cell movement toward the southeast; rain showers with thunder.

C) Strong to very strong echoes; echo tops 30,000 feet MSL; thunderstorms and rain showers.

65. PLT242 IRA

What is the relationship between centrifugal force and the horizontal lift component in a coordinated turn?

A) Horizontal lift exceeds centrifugal force.

B) Horizontal lift and centrifugal force are equal.

C) Centrifugal force exceeds horizontal lift.

66. PLT185 IRA

What is the initial primary bank instrument when establishing a level standard-rate turn?

A) Turn coordinator.

B) Heading indicator.

C) Attitude indicator.

67. PLT445 IRA
You check the flight instruments while taxiing and find that the vertical speed indicator (VSI) indicates a descent of 100 feet per minute. In this case, you
- A) may not proceed under IFR until the instrument is corrected by an authorized instrument repairman.
 - B) may take off under IFR and use 100 feet descent as the zero indication.
 - C) may take off and proceed under IFR but only in VFR weather conditions.
68. PLT224 IRA
(Refer to figure 1.) Which equipment determines the code to be entered in block 3 as a suffix to aircraft type on the flight plan form?
- A) DME, ADF, and airborne radar.
 - B) DME, transponder, and ADF.
 - C) DME, transponder, and RNAV.
69. PLT322 IRA
Which of the following should be considered as station passage when using VOR?
- A) The first flickering of the TO FROM indicator and CDI as the station is approached.
 - B) The first full scale deflection of the CDI.
 - C) The first complete reversal of the TO FROM indicator.
70. PLT090 IRA
(Refer to figure 24.) At what point should a VOR changeover be made from JNC VOR to MANCA intersection southbound on V187?
- A) 36 NM south of JNC.
 - B) 52 NM south of JNC.
 - C) 74 NM south of JNC.
71. PLT058 IRA
(Refer to figure 87.) What is indicated by the localizer course symbol at Jefferson County Airport?
- A) A published LDA localizer course.
 - B) A published SDF localizer course.
 - C) A published ILS localizer course, which has an additional navigation function.
72. PLT058 IRA
(Refer to figure 53.) What service is indicated by the inverse 'H' symbol in the radio aids to navigation box for PRB VORTAC?
- A) VOR with TACAN compatible DME.
 - B) Availability of HIWAS.
 - C) En Route Flight Advisory Service available.
73. PLT058 IRA
(Refer to figure 24.) Proceeding southbound on V187, (vicinity of Cortez VOR) contact is lost with Denver Center. You should attempt to reestablish contact with Denver Center on:
- A) 133.425 MHz.
 - B) 122.1 MHz and receive on 108.4 MHz.
 - C) 122.35 MHz.
74. PLT083 IRA
(Refer to figure 73.) What is the touchdown zone elevation for RWY 6?

- A) 174 feet MSL.
- B) 200 feet AGL.
- C) 270 feet MSL.

75. PLT415 IRA

The use of certain portable electronic devices is prohibited on aircraft that are being operated under

- A) IFR.
- B) VFR.
- C) DVFR.

76. PLT316 IRA

When are severe weather watch bulletins (WW) issued?

- A) Every 12 hours as required.
- B) Every 24 hours as required.
- C) Unscheduled and issued as required.

77. PLT051 IRA

Which weather forecast describes prospects for an area coverage of both severe and general thunderstorms during the following 24 hours?

- A) Terminal Aerodrome Forecast.
- B) Convective outlook.
- C) Radar Summary Chart.

78. PLT161 IRA

What minimum aircraft equipment is required for operation within Class C airspace?

- A) Two-way communications and Mode C transponder.
- B) Two-way communications.
- C) Transponder and DME.

79. PLT100 IRA

Which aeronautical chart depicts Military Training Routes (MTR) above 1,500 feet?

- A) IFR Planning Chart.
- B) IFR Low Altitude En Route Chart.
- C) IFR High Altitude En Route Chart.