



DOCUMENT
GSM-AUS-CPL.024

DOCUMENT TITLE
METEOROLOGY FOR AUSTRALIA

CHAPTER 31 – PAPER 1

Version 3.0
November 2014

This is a controlled document. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form, or by any means, electronic, mechanical, photocopying, recording or otherwise, without prior permission, in writing, from the Chief Executive Officer of Flight Training Adelaide.

CONTENTS	PAGE
PAPER 1	3
ANSWERS	14

PAPER 1

Suggested Time: 2 Hours

For Questions 1 to 11, refer to the following: use Jeppesen

METAR YSWG 1900 20010KT 0800 +SH SCT035 08/07 Q 1017

TTF SPECI YSSY 2100 31002KT 6000 FU 05/04 Q 1027 FM 2200 9999 NOSIG

1. A METAR is:
 - a. a routine weather report.
 - b. a routine weather forecast.
 - c. an aerodrome routine report.
 - d. an area weather report.
2. The period of validity of the METAR is :-
 - a. to 0000 Z
 - b. to 2400 Z.
 - c. to 0800 Z
 - d. it doesn't have one.
3. In the SPECI, 2100 refers to :-
 - a. the period of validity.
 - b. the time of the observation.
 - c. the visibility in metres.
 - d. the aerodrome code number.
4. The wind at YSWG is :-
 - a. 10 kt blowing towards 200°T.
 - b. 10 kt blowing towards 200°M.
 - c. 10 kt blowing from 200°M.
 - d. 10 kt blowing from 200°T.

5. What does 05/04 in the SPECI refer to?
- a. 04 refers to the dew point.
 - b. 05 is the dry bulb temperature and 04 is the wet bulb temperature.
 - c. period of expected change.
 - d. 05 is the outside air temperature and 04 is the dew point temperature.
6. +SH means :-
- a. rain showers.
 - b. recent showers.
 - c. heavy showers.
 - d. Radar Echo showing showers.
7. The visibility in the METAR is:-
- a. 8000 m.
 - b. 800 m.
 - c. 80 m.
 - d. 800 m in showers.
8. The QNH in Sydney at 9pm Z was :-
- a. 1027 mb.
 - b. 1017 mb.
 - c. is not given in a SPECI or METAR.
 - d. was 1027 mb over the period 2100 to 0000 GMT, and so cannot be determined.
9. The lowest cloud in the METAR is :-
- a. 3500' on local QNH.
 - b. 3500' AGL.
 - c. 350' on local QNH.
 - d. 350' AGL.

10. The TREND at Sydney is for :-
- deteriorating weather.
 - improving visibility.
 - the previous 3 hours and is Not To Advise.
 - indication of changes and amendments to current TAF's.
-

For Questions 11 to 20, refer to the following

TAF YQDI 082230Z 0214 06020KT 9999 SH FEW050
FM 06 04010KT SCT020 BKN040
INTER 0507 BKN015
T 18 19 23 14 Q 1008 1007 1007 1010

11. This is :-
- an aerodrome forecast.
 - a TTF.
 - an aerodrome report of expected weather deterioration.
 - a routine aerodrome report.
12. The period of validity is :-
- to 2000 Z
 - to 0620 Z.
 - to 0800 Z
 - to 1400 Z.
13. The lowest cloud base is :-
- 150' AGL.
 - 50' AGL.
 - 1500' AMSL.
 - 1500' AGL.

14. The cover at the beginning of the period of validity is :-
- 2 oktas.
 - 4 oktas.
 - 5 oktas.
 - 6 oktas.
15. The wind velocity at 1300 Z is :-
- 060/20.
 - 040/10.
 - 010/10.
 - 050/07.
16. Lowest visibility is :-
- 9999 m.
 - 80 m in rain.
 - 10 km or more.
 - code 9999 for VFR flights.
17. RASH indicates :-
- rain, snow and hail.
 - rain in Altostratus and hail.
 - rain showers.
 - rain.
18. FM06 means :-
- a new period of validity with changes remaining until the end of validity period.
 - wind graduations from 6 to 8 kt.
 - temperature gradually changing at a constant rate from 0600.
 - a gradual change at an approximately constant rate.
19. The QNH at 1100 Z is :-
- 1008 mb.
 - 1009 mb.
 - 1007 mb.
 - 1010 mb.

20. INTER 0507 means :-
- a. interaction between air masses.
 - b. permanent interruption of prevailing weather.
 - c. intervals of changing weather 0500 to 0700.
 - d. intermittent changes between 0500 and 0700.
21. ARFOR refers to :- Jepps.
- a. an airport.
 - b. an area.
 - c. an aircraft position.
 - d. a route.
22. VOLMET is available :- Jepps.
- a. on request.
 - b. during pre-flight briefing.
 - c. from the MET office.
 - d. through routine radio broadcasts.
23. An isobar is a line :- ch.4
- a. joining places of equal temperature.
 - b. drawn around pressure systems.
 - c. joining places of equal pressure.
 - d. drawn on a MSL Synoptic Chart.
24. The passage of a cold front may be indicated by :
- a. wind backing and pressure falling.
 - b. wind backing and pressure rising.
 - c. wind veering and pressure falling.
 - d. wind veering and pressure rising.

25. You are planning a flight to a coastal strip and you plan to arrive mid afternoon. The strip runs parallel to the coast approximately north/south and lies close to the water, which is to the west. What would you expect the wind to be on arrival?
- a crosswind from the west.
 - a crosswind from the east.
 - a westerly during the summer at 1000'.
 - an easterly during the summer.
26. A large sudden decrease in headwind component during an approach to land will, with attitude and power constant, cause an :-.
- initial increase, and then decrease in the glide path angle.
 - initial decrease, and then increase in the glide path angle.
 - initial increase in glide path, which remains until the roundout.
 - initial decrease in glide path, which remains until the roundout.
27. The area QNH is routinely issued by the MET office every
- 1 hour.
 - 2 hours.
 - 3 hours.
 - 4 hours.
28. A gradient wind is one that occurs above the friction layer and is a combination of
- Coriolis effect, cyclostrophic force and the pressure gradient.
 - Coriolis and centrifugal and flows around curved isobars.
 - Geostrophic and cyclostrophic force.
 - Coriolis and pressure gradient force and flows parallel to straight isobars.
29. An aerodrome forecast must be valid for a certain period before your ETA, and a certain period after your ETA. These periods are :-
- 30 min. before and 30 min. after.
 - 30 min. before and 60 min. after.
 - 60 min. before and 30 min. after.
 - 60 min. before and 60 min. after.

30. When crossing a mountain range at right angles, with a strong headwind, there is danger of being caught in :- ch.18
- updraughts on the lee side.
 - updraughts on the windward side.
 - downdraughts on the lee side.
 - downdraughts on the windward side.
31. Rime ice is most likely to occur in :- ch.19
- Cu cloud.
 - Cb cloud.
 - freezing rain.
 - As cloud.
32. The temperature range most conducive to the formation of clear ice is :- ch.19
- 10°C to -20°C.
 - 0°C to -10°C.
 - 10° to 0°C.
 - it depends on the size of the water droplets
33. Advection fog is formed when :- ch.14
- the land radiates its heat into the atmosphere at night, and then cools the air at low levels.
 - warm moist air flows over cool surface.
 - air at the surface is cooled at night, by conduction, to below its dew point temperature.
 - cool moist air flows over a warm surface.
34. For which of the following flights would a forecast be a mandatory requirement. Jepps.
- any flight away from the vicinity of the aerodrome.
 - flight time of more than one hour.
 - MTOW 1930 kg or more, regardless of distance.
 - All flights regardless of distance flown or aircraft weight.

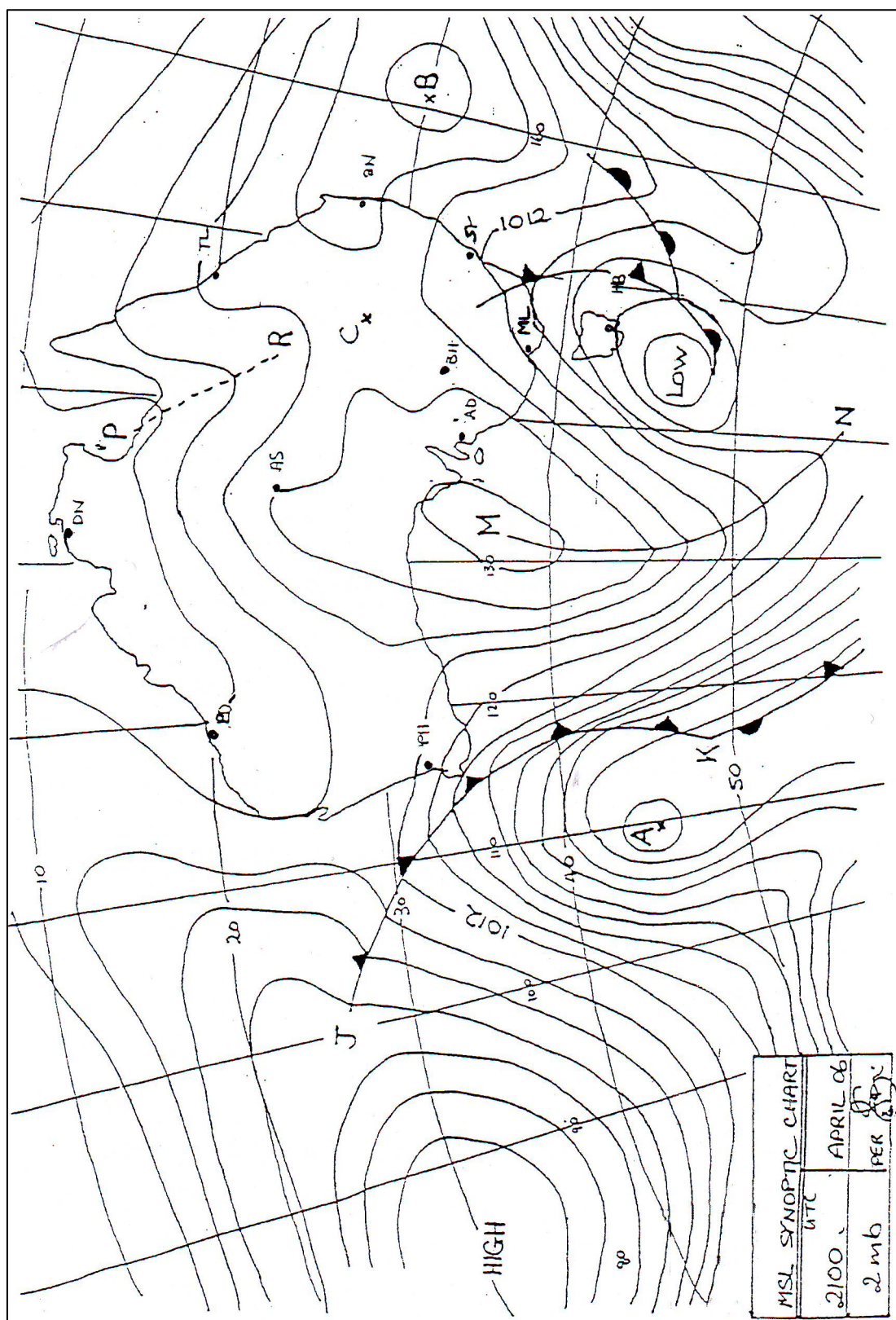
35. Meteorological Visibility refers to :- Jepps.
- the visibility along the runway.
 - the visibility for a landing approach.
 - minimum visibility over half or more of the sky.
 - average visibility over the entire sky.
36. When dry bulb and wet bulb have the same value :- ch.5
- the temperature is greater than 0°C.
 - the relative humidity is 100%.
 - the atmosphere is stable.
 - the atmosphere is unstable.
37. The zone of transition between two air masses of different density is commonly called :- ch.15
- a front.
 - the friction layer.
 - the turbulence zone.
 - a trough.

For Questions 38 to 50 at the end of the paper, refer to the typical MSL Synoptic Chart :-

38. The Pressure pattern around B is a :-
- ridge.
 - cool.
 - low.
 - high.
39. The pressure pattern around point C is a :-
- ridge.
 - high.
 - low.
 - col.

40. The line J K represents a :-
- a. occluded front.
 - b. warm front.
 - c. stationary front.
 - d. cold front.
41. The line MN represents a :-
- a. trough.
 - b. ridge.
 - c. line of equal pressure.
 - d. front.
42. The line PR represents :-
- a. front.
 - b. trough.
 - c. ridge.
 - d. line of equal pressure.
43. The wind direction at AMML is closest to :-
- a. 040°T.
 - b. 220°T.
 - c. 130°T.
 - d. 310°T.
44. The wind direction at ASAS is closest to :-
- a. 090°T.
 - b. 180°T.
 - c. 270°T.
 - d. 360°T.
45. The wind direction at 40°S 110°E is closest to :-
- a. 090°T.
 - b. 180°T.
 - c. 270°T.
 - d. 360°T.

46. Thunderstorms are most likely to develop later in the day at :- ch.20
- a. DN.
 - b. AD.
 - c. AS.
 - d. BN.
47. Later the wind will back suddenly, temperature will fall and showers are likely at :- ch.15
- a. BN.
 - b. ML.
 - c. AD.
 - d. PH.
48. At 2100 Z MSL Pressure at TL is closest to :-
- a. 1008 mbs.
 - b. (1010 mbs.
 - c. 1012 mbs.
 - d. 1014 mbs.
49. At 2100 Z wind strength will be greatest at :- ch.4,9
- a. 30°S 110°E.
 - b. 30°S 120°E.
 - c. 30°S 140°E.
 - d. 30°S 160°E.
50. METAR XXXX 2100 23012KT 9999 SH FEW015 SCT025 15/12 Q 1013
- a. BN.
 - b. ML.
 - c. AS.
 - d. PD.



ANSWERS

- | | | | | |
|-------|-------|-------|-------|-------|
| 1. a | 11. a | 21. b | 31. d | 41. b |
| 2. d | 12. d | 22. d | 32. b | 42. b |
| 3. b | 13. d | 23. c | 33. b | 43. b |
| 4. d | 14. a | 24. b | 34. a | 44. b |
| 5. d | 15. b | 25. a | 35. c | 45. c |
| 6. c | 16. c | 26. a | 36. b | 46. a |
| 7. b | 17. c | 27. c | 37. a | 47. d |
| 8. a | 18. a | 28. a | 38. d | 48. d |
| 9. b | 19. d | 29. b | 39. d | 49. a |
| 10. b | 20. d | 30. c | 40. d | 50. b |