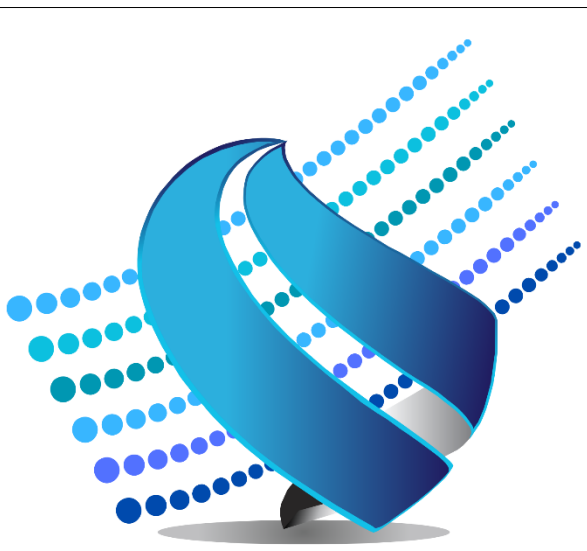
MODEL PAPER 09

Marking Scheme



Model Paper 09 – MCQ Marking Scheme

1) 4	11) 2	21) 2	31) 2
2) 1	12) 2	22) 1	32) 3
3) 1	13) 4	23) 2	33) 1
4) 2	14) 1	24) 4	34) 2
5) 2	15) 2	25) 1	35) 2
6) 1	16) 3	26) 3	36) 1
7) 1	17) 2	27) 2	37) 4
8) N/A	18) 1	28) 2	38) 1
9) 4	19) 3	29) 1	39) 2
10) 4	20) 2	30) 1	40) 4

1. Option **(4)** has:
- **Highest clock speed** (4.0 GHz)
- **Largest cache** (20 MB)
- **Max RAM** (64 GB, same as 3)
- **More ports** (8 USB)

Answer Q1: (4) Processor: 4.0 GHz, Cache: 20MB, RAM: 64GB, 8 USB ports

2. (1) Optical Character Recognition (OCR) Scanner
OCR is the standard tool to *read* printed/handwritten text and convert it to editable digital characters.

3. (1) Encrypted Solid State Drive (SSD)
Full-disk encryption gives strong protection even if the device is lost or stolen.

4. (2) Graphical Processing Unit (GPU)
GPUs are optimized for massively parallel numeric computation, which speeds up model training.

5. (2) Edge Router
Edge routers are key in 5G to process and route data near the user, cutting delays and achieving ultra-low latency.

6. (1) 1016_{8}

7. (1) 214_{10}

8. Correct hex for 7621_{8} is $F91_{16}$.

9. (4) 1024 × 1024 × 1024 GB

Recall:

- 1 KB = 1024 B
- 1 MB = 1024 KB
- 1 GB = 1024 MB
- 1 TB = 1024 GB
- 1 PB = 1024 TB
- 1 EB = 1024 PB

In terms of GB:

$$1\ \text{EB} = 1024\ \text{PB} = 1024 \cdot 1024\ \text{TB} = 1024 \cdot 1024 \cdot 1024\ \text{GB}$$

So:

$$1\ \text{EB} = 1024 \times 1024 \times 1024\ \text{GB}$$

That matches **option (4)**.

In terms of KB (just to see):

$$\begin{aligned} 1\ \text{EB} &= 1024\ \text{PB} \\ &= 1024^2\ \text{TB} \\ &= 1024^3\ \text{GB} \\ &= 1024^4\ \text{MB} \\ &= 1024^5\ \text{KB} \end{aligned}$$

So **option (3)** also numerically equals 1 EB, but expressed in KB.

In a typical single-answer MCQ, they usually expect the **GB form**, so:

10. (4) All A, B, and C
IPv6 expands address space to 128 bits, removes broadcast, and includes auto-config + better built-in security tools.

11. (2) 1

12. (2) Ctrl + Y

13. (4)

14. (1) A and B only.
Cloud storage supports real-time collaboration and usually offers automatic backups with version control, but files can often be accessed offline if they're synced to your device, so an internet connection is not *always* required.

15. (2) A_2

16. (3) `=COUNTIF(B2:D7, "<>Absent")`

17. (2) `=SUM(B2:D2)`

18. (1) I and III only

19. (3) Flight_ID

20. (2) Booking_ID

21. (2) Flight_ID

22. (1) FLIGHT_SCHEDULE

23. (2) Distance, Fuel Consumed

24. (4) Selection and Iteration only

25. (1) `true, true, false`

26. (3) String

27. (2) 15

28. (2) To evaluate multiple possible values for a single variable

29. (1) Iteration: 11 Iteration: 12 Iteration: 21 Iteration: 22 Iteration: 31 Iteration: 32

30. (1) Nested iteration

31. (2) 15

32. (3) Pseudocode provides a language-independent way to express algorithms.

33. (1) Pre-test loop

34. (2) A → B → C → D

35. (2) A and C only
SaaS apps are accessed over the internet without local install (A) and the provider handles updates and maintenance (C); users **do not** manually maintain the software, so B is false.

36. (1) A Secure Socket Layer (SSL) Certificate
An SSL/TLS certificate is specifically used to create **encrypted, secure** connections (HTTPS) between two systems over the internet.

37. (4) All A, B, and C
Raster images are made of pixels and lose quality when scaled (A), more resolution means more pixels and bigger file size (B), and they're ideal for detailed photos and artwork (C).

38. (1) A and B only

Lossless keeps all original data (A) and lossy discards some data to shrink size (B); JPEG and MP3 are **lossy**, not lossless, so C is false.

39. (2) A live chat feature with faculty

Login, course dashboard, and notifications are core homepage functions; **live chat with faculty** is helpful but not essential for the basic portal homepage.

40. (4) The text "User Profile" will always appear below the image

The `alt` text only appears if the image can’t load or for screen readers, not “always below” the image, while loading the image, showing alt text on failure, and right alignment with text wrap (1–3) are correct.