

43. The Design Principle "Anticipate Obsolescence" can be achieved by

- (a) using undocumented features of software libraries
- (b) using reusable software from smaller companies
- (c) using standard languages and technologies that are supported by multiple vendors
- (d) using deprecated classes

44. The Design Principle "Design for Portability" can be achieved by

- (a) avoiding the use of facilities that are specific to one particular environment
- (b) anticipating obsolescence
- (c) using only big-endian format
- (d) using only 2-byte integers

45. Providing a command-line version, in addition to usual graphical user-interface, achieves the goal of

- (a) Design defensively
- (b) Design for testability
- (c) Design for portability
- (d) Anticipate obsolescence

GROUP-B

46. A university is admitting students in a professional course, subject to the following conditions:

- (a) Marks in Java ≥ 70
- (b) Marks in C++ ≥ 60
- (c) Marks in OOAD ≥ 60
- (d) Total in all three subject ≥ 220 OR
Total in Java and C++ ≥ 150

If the aggregate marks of an eligible candidate is more than 240, he/she will be eligible for the **scholarship course**, otherwise he/she will be eligible for a **normal course**. The program reads the marks in the three subjects and generates the following eligibility (outputs):

- (i) Not eligible
- (ii) Eligible for **scholarship course**
- (iii) Eligible for **normal course**

(a) Construct a matrix "**Conditions**" of conditions (in rows) vs. rules (in columns). An entry in the matrix will be true(T), or false(F), or immaterial/don't-care (I). Thus, a column is really a vector of **conditions**, the index to the vector being the condition-ID. The rules are the eligibility outputs (i)..(iii) listed above. Several columns may correspond to the same eligibility output because a different set of conditions can lead to the same output. For compactness, the rules may be labelled R1, R2, R3, etc. in the matrix.

(b) Construct another matrix "**Actions**", just below "**Conditions**". Its rows are the outputs in (i)-(iii) above, and its columns are identical to that of "**Conditions**". An entry in this matrix will be full (X) or empty (blank). In other words, a column j represents a particular combination of conditions, and a full (X) entry in $\text{Actions}[i,j]$ specifies that the eligibility in row- i will be applicable for that combination of conditions.

(c) Design test cases, one for each column in (a) above. Write your answer in the form of a table with columns: Serial No, Java-marks, C++ marks, OOAD marks, Aggregate-marks, Eligibility (output).

$$9 + 4 + 7 = 20$$

END

13 → Koli to NIP

14 → NIP to Kalim to Lava (IN)

15 → Lava Seigt (IN) + Rishop Seigt → Lava to N

16 → Rishop Seigt → Lava (IN) → Lava to Kalim + Kalim Seigt (IN)

17 → Lava to Kalim + Kalim Seigt (IN) → Kalim to Danjee (IN)

18 → Kalim to Danjee (IN) → Danjee Seigt (IN)

19 → Danjee Seigt 7 pt. → Back to NIP