COMPUTATIONAL THINKING 's -1 (September)
GA Answers

1.The following procedure is executed using the "**Scores**" dataset.
Step 1: Arrange all cards in a single pile called Pile 1
Step 2: Maintain **X** and initialize it to False
Step 3: If Pile 1 is empty then stop the iteration
Step 4: Read the top card in Pile 1
Step 5: If Gender == M and Mathematics ≥ 70 then set **X** equals to True
Step 6: If Gender == M and Physics ≥ 70 then set **X** equals to True
Step 7: Move the current card to another pile called Pile 2 and repeat from step 3
At the end of the execution, **X** will be True if

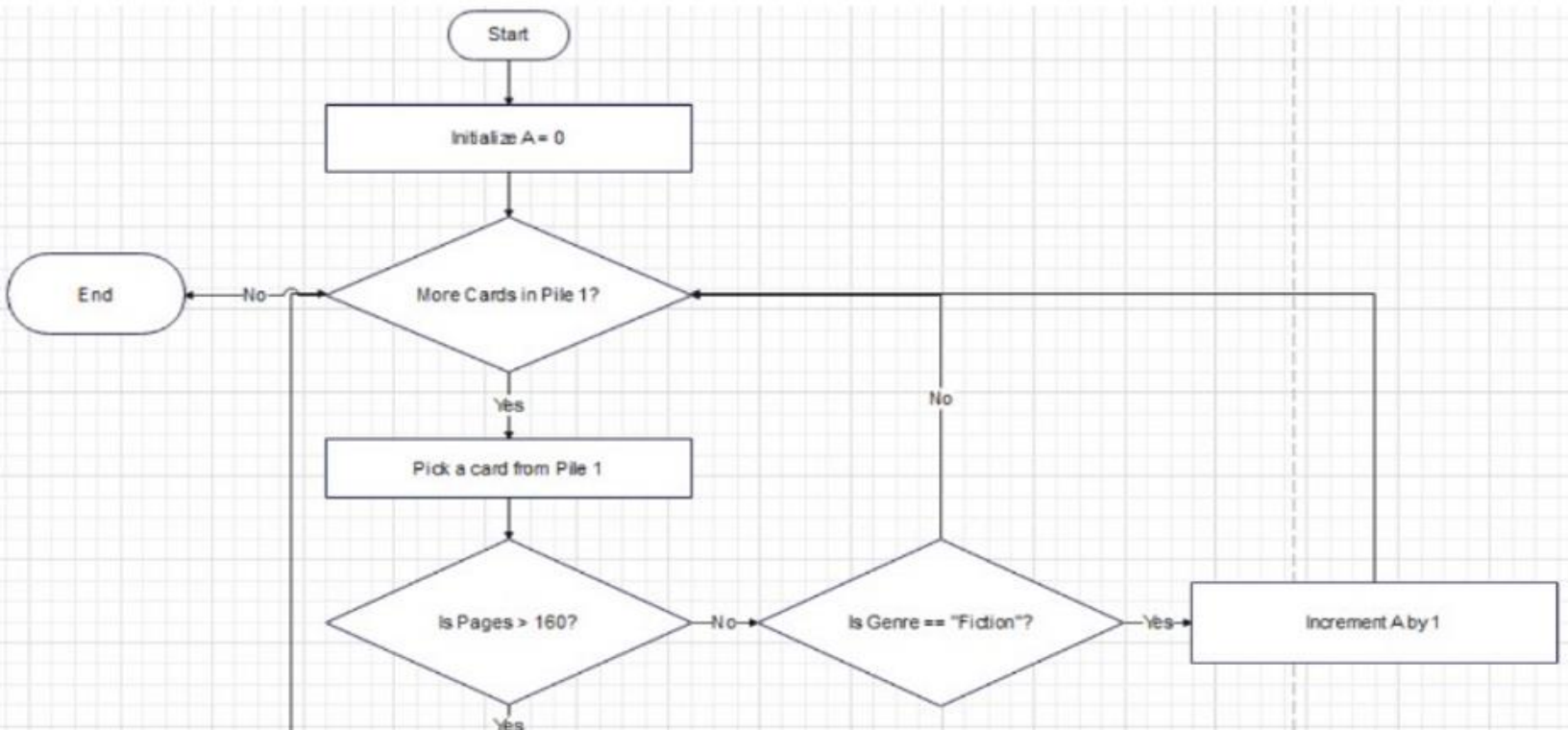
a. **There exists at least one Male student whose marks is greater than or equal to 70 in either Mathematics or Physics**

b. *There exists at least one Male student whose marks are greater than or equal to 70 in both Mathematics and Physics*

c. There exists at most one Male student whose marks is greater than or equal to 70 in either Mathematics or Physics

d. There exists at most one Male student whose marks are greater than or equal to 70 in both Mathematics and Physics

2.The following flow chart is executed using the "**Library**" dataset. Interpret the flowchart and answer the given question. What does **A** return at the end of execution?



a. Number of books having pages greater than 160 or genre is fiction

b. Number of books having pages greater than 160 and genre is fiction

c. Number of books having pages less than 160 or genre is fiction

d. Number of books having pages less than 160 and genre is fiction

3.The following procedure is executed using the "**Olympics**" dataset.
Step 1: Arrange all cards in a single pile called Pile 1
Step 2: Maintain a variable **count** and initialize to 0
Step 3: If Pile 1 is empty then stop the iteration and return **count**
Step 4: Pick a card from Pile 1
Step 5: If Gender == M and Nationality != China and Medal == Gold then increment
count by 1
Step 6: Move the current card to another pile called Pile 2 and repeat from step 3
At the end of execution, what will **count** return?

a. Number of male participants who won the gold medal

b. Number of male participants of China who won the gold medal

c. Number of male participants who won gold medal other than Nationality = China

d. Number of male participants who either won a gold medal or are not from China

4.The following procedure is executed using the “**Library**” dataset.At the end of the
execution, **count** stores the number of books that were published between the years
1945 and 2000. But the programmer has missed a Step. Identify the correct Step.
Step 1: Arrange all cards in a single pile called Pile 1
Step 2: Maintain a variable **count** and initialize to 0
Step 3: If Pile 1 is empty then stop the iteration and return **count**
Step 4: Pick a card from Pile 1
Step 5: ——————————
Step 6: Move the current card to another pile called Pile 2 and repeat from step 3

a. *If 1945 ≤ Year and Year ≤ 2000 then increment count by 1*

b. If 1945 ≥ Year and Year ≤ 2000 then increment count by 1

c. If 1945 ≤ Year or Year ≥ 2000 then increment count by 1

d. If 1945 ≥ Year but not Year ≤ 2000 then increment count by 1

5.What will variable **A** represent after execution of the following procedure on the ”**Words**”
dataset?
Step 1: Arrange all cards in a single pile called Pile 1
Step 2: Initialize variable **A** to 0
Step 3: If Pile 1 is empty then stop the iteration
Step 4: Read the top card in Pile 1
Step 5: If the Word does not end with a full stop and Part of Speech is ”Pronoun” and
LetterCount ≥ 2 then increment **A**
Step 6: Move the current card to another pile called Pile 2 and repeat from step 3

a.Total number of Pronouns in the dataset

b.Total number of Pronouns that are not at the end of a sentence

c.*Total number of Pronouns with letter count greater than or equal to 2 that are at the end of a sentence*

d.Total number of Pronouns with a letter count greater than or equal to 2 that are not at the end of a sentence

6.The following pseudocode is executed using the ”**Shopping Bills**” dataset.

Step 1: Arrange all cards in a single pile called Pile 1
Step 2: Initialize variable **A** to 0
Step 3: If Pile 1 is empty then stop the iteration return **A**
Step 4: Pick a card in Pile 1
Step 5: If Total Bill Amount ≥ **A** then store Total Bill Amount value in **A**
Step 6: Move the current card to another pile called Pile 2 and repeat from step 3
The value of **A** is ? 4174

7.The following pseudocode is executed using the ”**Olympics**” dataset.
Step 1: Arrange all cards in a single pile called Pile 1
Step 2: Initialize variable **count** to 0
Step 3: If Pile 1 is empty then stop the iteration return **count**
Step 4: Pick card X in Pile 1
Step 5: If X.Nationality == ”Indian” and X.Year == 2000 then increment **count** by 1
Step 6: Move the current card to another pile called Pile 2 and repeat from step 3
At the end of execution, what does **count** represent?

a.Number of participants who won medals

b.Number of participants who won medal except the year 2000

c.Number of Indians who won medal in the year 2000

d.Number of participants who won medal in the year 2000 except Indians

8.The following pseudocode is executed using the ”**Scores**” dataset.
Step 1: Arrange all cards in a single pile called Pile 1
Step 2: Initialize variable **A** to 0
Step 3: If Pile 1 is empty then stop the iteration return **A**
Step 4: Pick card X in Pile 1
Step 5: If X.Total ≥ **A** then store value of X.Total in **A**
Step 6: Move the current card to another pile called Pile 2 and repeat from step 3
At the end of execution, what does **A** return?

a. Compares the total marks of each student and returns the maximum among them

b. Compares the total marks of each student and returns the total marks of each student

c. Compares total marks of each student and returns the minimum among them

d. None of the above

9.The following information represents a new card added in the **Library** dataset. Identify such lines with respect to the sanity of data.
LINE 1: Row No: 30
LINE 2: Name: Salman Rushdie
LINE 3: Author: Midnight’s Children
LINE 4: Genre: Fiction
LINE 5: Language: English
LINE 6: Pages: 400
LINE 7: Publisher: Jonathan Cape
LINE 8: Year: 446

a. LINE 1

b. LINE 2

c. LINE 3

d. LINE 4

e. LINE 5

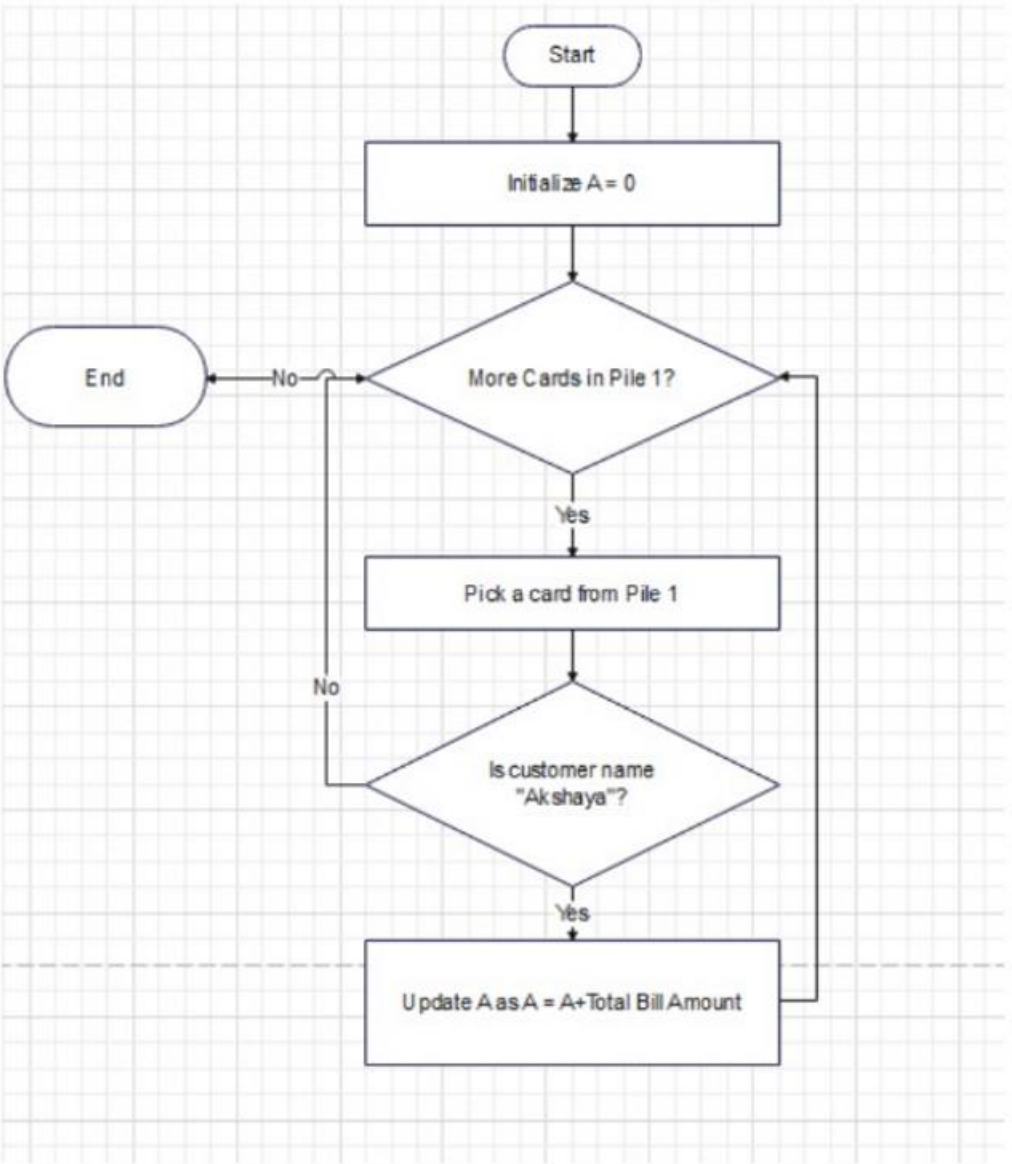
f. LINE 6

g. LINE 7

h. LINE 8



10.The following flow chart is executed using the ”**Shopping Bills**” dataset. Interpret the
flowchart and answer the given question.



The value of **A** is _5643_