



Roll No.

Answer Sheet No. \_\_\_\_\_

Sig. of Candidate. \_\_\_\_\_

Sig. of Invigilator. \_\_\_\_\_

# COMPUTER SCIENCE HSSC-II

## SECTION – A (Marks 15)

**Time allowed: 20 Minutes**

**NOTE:-** Section-A is compulsory and comprises pages 1-2. All parts of this section are to be answered on the question paper itself. It should be completed in the first 20 minutes and handed over to the Centre Superintendent. Deleting/overwriting is not allowed. Do not use lead pencil.

**Q. 1** Insert the correct option i.e. A / B / C / D in the empty box provided opposite each part. Each part carries one mark.

- (i) C language was developed by:
- A. Van Neumann                      B. John Backus  
C. Charles Babbage                  D. Dennis Ritchie
- (ii) Which of the following is a compiler directive?
- A. #include<stdio.h>                  B. int main( )  
C. getch( )                              D. All of these
- (iii) C statements ends with a:
- A. Full stop                              B. Semi colon  
C. Colon                                  D. Comma
- (iv) A type of language in which instructions are written in binary form is:
- A. Machine language                  B. High level language  
C. Assembly language                  D. None of these
- (v) A space in computer's memory set aside for some data that can be changed is called:
- A. Variable                              B. Constant  
C. Integer                                D. Floating point
- (vi) Which of the following is not valid variable name?
- A. Thisisvalidname?                  B. thisisnotvalid  
C. howaboutthisname                  D. is\_this\_valid
- (vii) Which is numeric data type?
- A. Integer                                B. Floating point  
C. Both A and B                        D. None of these





# COMPUTER SCIENCE HSSC-II

Time allowed: 2:40 Hours

Total Marks Sections B and C: 60

NOTE:- Sections 'B' and 'C' comprise pages 1-2 and questions therein are to be answered on the separately provided answer book. Answer any thirteen parts from Section 'B' and attempt any three questions from Section 'C'. Use supplementary answer sheet i.e. Sheet-B if required. Write your answers neatly and legibly.

## SECTION – B (Marks 39)

Q. 2 Attempt any THIRTEEN parts. The answer to each part should not exceed 5 to 6 lines.

( 13 x 3 = 39 )

- (i) 

```
# include (stdio.h)
void main(void);
{
    Printf("I love Pakistan);
}}
```

 Find at least three errors in the above program segment. 03
- (ii) Write a short note on different types of programming languages. 03
- (iii) a. What does # indicate in the above program of Q2 (Part-i)? 01  
b. What will happen if <stdio.h> is missing from the program? 01  
c. What is the function of printf statement? 01
- (iv) In what variable type the following information will be stored?  
a. Your name. 01  
b. Number of brothers and sisters you have. 01  
c. Your height. 01
- (v) Explain the difference between constant and variables with examples? 03
- (vi) Find the value of.  
a.  $(i > 0) \&\&(j < 5)$  where  $i = 8, j = 5$  01  
b.  $(x + y) / x - y$  where  $x = 2, y = 4$  01  
c.  $a ** 3 / (b * a)$  where  $a = 4, b = 2$  01
- (vii) Explain different types of errors that occur in a program, with examples. 03
- (viii) 

```
for (i = 1; i <= 5; i++)
    printf("\n%d", i);
```

 Rewrite the above program segment using **while** loop. 03
- (ix) 

```
answer = (x > y) ? x * y : x + y;
```

  
a. Convert the above statement with conditional operator to an equivalent if-else statement. 02  
b. Write the generalized form of conditional operator. 01

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- (x) a. Define Function. Why is it used in a program? 02  
 b. Name any three functions commonly used in C-language programs. 01
- (xi) Differentiate between Data Redundancy and Data Inconsistency. 03
- (xii) In a class there are many students working on 3 projects named "homework", "class work" and "tests". Some students are working on 2 projects at a time and some only on one project. There are 5 different classes and each student belongs to one class only. Draw an ER diagram that satisfies the above system. 03
- (xiii) a. Define 'Field' and 'Record' 02  
 b. How many fields and records does the following table contain? 01
- | Roll No. | Name    | Subject | Class    |
|----------|---------|---------|----------|
| 2341     | Shaheer | English | 2nd year |
| 4500     | Saima   | Maths   | 1st year |
- (xiv) **BOOK (Book ID, Title, Author, Date published)**  
 What is the Entity name, Primary key field and attributes in the above line. 1+1+1
- (xv) Define the following terms: DDL, DML, DBA. 1+1+1
- (xvi) What are the advantages of database approach over traditional file approach. 03
- (xvii) a. Differentiate between local variables and global variables. 02  
 b. What functions are used to read and write characters to a file. 01

**SECTION – C (Marks 21)**

**Note:- Attempt any THREE questions. All questions carry equal marks. ( 3 x 7 = 21 )**

**Q. 3** Read the following scenario to make a program for printing grades of the marks of students. Input the marks from keyboard.

Marks	Grades
Greater than or equal to 80	A
>=70 and <80	B
>=60 and <70	C
>=50 and <60	D
Less than 50	F

- a. Write down a program using any selection structure. 05  
 b. Why do you think that the selection structure you selected was best? 02
- Q. 4** Write down a program to calculate the electricity bill. The rates of electricity per unit are as follows:
- If the units consumed are  $\leq 300$ , then the cost is Rs.2 per unit.
  - If the units consumed are  $> 300$  and  $\leq 500$  then the cost is Rs.5 per unit.
  - If the units consumed exceed 500 then the cost per unit is Rs.7.
- A line rent Rs.150 is also added to the total bill and a surcharge of 5% extra if the bill exceeds Rs.2000. Calculate the total bill with all the conditions given above. 07
- Q. 5** Explain different types of selection structures used in C-language with examples. 07
- Q. 6** a. What are the tasks performed by a Database Administrator? 03  
 b. Briefly explain the Field data types available in Access. 04