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இலங்கைப் பரீட்சைத் திணைக்களம்
Department of Examinations, Sri Lanka
253 | E | Prac

NATIONAL DIPLOMA IN TEACHING, FINAL EXAMINATION - 2023

(253) Information and Communication Technology - III

(Practical Test)

2 1/2 hours

* *Question* **1** *in* **Part A** *is compulsory.*
* *Answer* ***six*** *questions selecting at least* ***two*** *questions from each part.*

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Part A

1. Boot your computer system in windows operating system and do the following activities.

(i) (*a*) Create a folder on the desktop of your computer and name it using your index number. (02 *marks*)

(*b*) Create three sub folders and name as 'Part A', 'Part B', 'Part C' inside the folder you created above.
(Note: When saving files for all questions, you should use relevant sub folders) (03 *marks*)

(ii) Write down IP address and subnet mask of your computer and save it using notepad file as "Q1(ii)". (03 *marks*)

(iii) Use screen shots to show the steps to optimize your drivers which help your computer to run more efficiently and save them in the relevant folder. "Q1(iii)" (05 *marks*)

(iv) Change the size and the colour of the mouse pointer on the computer screen and get relevant screen shots before and after and save them as "Q1(iv)". (05 *marks*)

(v) Write down the steps to change the desktop icons on your computer. Save the path using a notepad file as "Q1(v)". (03 *marks*)

(vi) If your computer loses internet connection, mention step by step how to get internet facility on the same computer using mobile data on your mobile phone. Using a notepad file and save as "Q1(vi)". (04 *marks*)

(25 *marks*)

2. Using a relational DBMS software,

(i) Create a database named 'AsianSports'. (02 *marks*)

(ii) Create following three tables using;

(*a*) suitable data types for each field (03 *marks*)

(*b*) suitable primary key (03 *marks*)

(*c*) given records (03 *marks*)

Customer

CustomerID	FirstName	City	Email
100	Krish	Colombo	Krish200@gmail.com
106	Nelum	Gampaha	Nelu123@gmail.com
112	Praveen	Kandy	Praveen@yahoo.com
127	Senith	Matara	Seni2023@gmail.com

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Orders

OrderID	CustomerID	OrderDate
1001	100	2023/08/18
1002	106	2023/08/24
1003	112	2023/08/25
1004	100	2023/08/28

Items

ItemName	Price	Quantity	OrderID
Sports ware	3500.00	30	1001
Shoes	5000.00	50	1002
Cricket bats	4500.00	150	1003
Glows	1500.00	120	1004

(iii) Create a query using SQL Commands to update record of 1st customer (CustomerID=100) with the city and Email. Change city as 'Galle' and Email as "Krishan2023@gmail.com". Get a screen shot of the above SQL statement and save it as "Q2(iii)". (02 *marks*)

(iv) Create a query using SQL Commands to view the records of customers who have ordered cricket bats. After running the query, get the output and save the screen shots as "Q2(iv)". (02 *marks*)

(15 *marks*)

3. Create a cover page using raster graphic software (Adobe Photoshop or GIMP) according to the instruction given below.

(i) Open raster graphic software and make a new document with page size 4″×6″. (01 *mark*)

(ii) Design an attractive cover page for an ICT text book. Include the following.

- Image layers
  - Image for the Background (02 *marks*)
  - Image for the logo (02 *marks*)

Relevant images are stored in the given folder named "Photoshop" which is available in the desktop.

(iii) Include the following text layers in to your cover page.

- Text layers
  - Information and Communication Technology
  - National Diploma in Teaching
  - Institute of Education (03 *marks*)

(iv) Apply suitable gradient to fill the text 'Information and Communication Technology'. (02 *marks*)

(v) Apply layer styles according to the given below.

- Information and communication technology - Inner Glow
- National Diploma in teaching - Inner shadow
- Institute of Education - Drop shadow (03 *marks*)

Save it as PSD or JPG file. file name should be 'cover page'. (02 *marks*)

(15 *marks*)

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Part B

4. Run a Scratch programme by referring to the instructions given below.

Open a new project.

(i) Insert a suitable background for a night. (02 *marks*)

(ii) Edit the background and draw a moon, fill with yellow colour. (02 *marks*)

(iii) Insert a "Witch" sprite from sprite library. (01 *mark*)

(iv) Then set the motion commands at the point where "x" and "y" values become (0,0) and say "Good Evening" for 2 seconds. (03 *marks*)

(v) Then hide "Witch" for 1 second. (02 *marks*)

(vi) Make the "Sprite" show randomly in the sprite area once in 2 seconds. (02 *marks*)

(vii) Add any suitable sound for sprite ("Witch"). (02 *marks*)

(viii) Give a suitable name for created project and save. (01 *mark*)

(15 *marks*)

5. (i) (*a*) Create a new work book and save it as "Final marks" in your folder. (01 *mark*)

(*b*) Create the following worksheet with all records and rename it as "Measurement". (01 *mark*)

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Student's Marks for Educational Measurement												
2	Student ID	StudentName	Assignment1	Assignment2	Assignment3	Assignment4	Total	Average	60%	Exam Marks	40%	Final Marks	Rank
3	100	Warsha	75	85	90	88				78			
4	101	Arunika	50	62	70	60				50			
5	102	Kushan	90	85	88	75				84			
6	103	Pradeepa	55	70	65	72				60			
7	104	Thamali	62	68	72	73				69			
8	105	Dilshani	78	80	78	84				78			
9													

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(ii) Fill the Total and Average columns using formula. (02 *marks*)

(iii) Calculate the 60% of Total assignment marks of each student in Cell I3 to I8 using a formula. (02 *marks*)

(iv) Calculate 40% of Exam marks of each student using the column of Exam Marks. (01 *mark*)

(v) Fill in the Final Marks column of each student using the total of 60% of assignment marks and 40% of exam marks. (02 *marks*)

(vi) Calculate ranks of students in Cell M3 to M8 using a formula. (02 *marks*)

(vii) (*a*) Create a bar chart to display Final marks shown in column L with student names. (02 *marks*)

(*b*) Show the students' final marks on the bar chart. (01 *mark*)

(*c*) Add a suitable title for the chart. (01 *mark*)

(15 *marks*)

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16.

Artificial Intelligence

Artificial Intelligence is the simulation of human intelligence processes by machines, especially computer systems. Specific applications of AI include expert systems, natural language processing, speech recognition and machine vision.

A virtual assistant like Siri is an example of an AI that will access your contacts, identify the word "Mom," and call the number. These assistants use NLP, ML, statistical analysis, and algorithmic execution to decide what you are asking for and try to get it for you.

Today, the amount of data that is generated, by both humans and machines, far outpaces humans' ability to absorb, interpret, and make complex decisions based on that data. Artificial intelligence forms the basis for all computer learning and is the future of all complex decision making.

(i) Type the above paragraphs using 'Arial' Font and Font size 12. (02 *marks*)

(ii) Align your paragraph to justify. (01 *mark*)

(iii) Make Drop cap in the 1st letter of the 2nd paragraph. (01 *mark*)

(iv) Keep 1.5 line space for the 3rd paragraph. (02 *marks*)

(v) Set up the page layout on landscape orientation and the page margins as follows:

Top : 1″
Left : 1.5″
Bottom : 1″
Right : 1″ (01 *mark*)

(vi) Create a table using below data and shade the first row using pink colour. (01 *mark*)

Monday	Tuesday	Wednesday	Thursday	Friday
Maths	Sinhala	Maths	English	English
English	English	Sinhala	Science	Sinhala
Ict	Maths	Tamil	Sinhala	Maths
Maths	Art	Science	Maths	Ict
Sinhala	Science	History	History	Science
Science	History	Music	Music	History

(vii) Center align the table header and change text direction. (01 *mark*)

(viii) Insert a column before the 1st column and name it as "Time". Fill the data to the column inserted. (01 *mark*)

(ix) Insert a new row between 4th and 5th row, merge all the cells in that row and name it as "Interval". Merge and Center the text "Interval". (02 *marks*)

(x) Use the header and footer tool to enter the index number, name of the college and page number. (02 *marks*)

(xi) Save the document as "AI" in relevant folder. (01 *mark*)

(15 *marks*)

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Part C

7. Create a presentation using a presentation software. (MS Powerpoint / Libre Office impress) according to the instruction given below.

(i) Create a presentation and add four blank slides.

(ii) Your first slide should be the title slide as "Healthy Life Style". Make the font "Algerian" and size 72. (01 *mark*)

(iii) Insert an image to the background of the first slide which is available in the folder named "Presentation" on desktop. (02 *marks*)

(iv) (*a*) Content for slide 2.

What should people do to stay healthy?

Health is the most important thing we have. It is good to have a healthy life style. Healthy lifestyle include *healthy food* and physical activity (02 *marks*)

(*b*) Insert hyperlink to "*healthy food*". For this hyperlink relate the document healthyfood.pdf which is in the 'presentation' folder. (02 *marks*)

(v) Insert the 3rd slide with a layout of bulleted list mentioned below.

What should you do to be healthy.

- Do morning exercises
- Eat healthy food
- Sleep seven or eight hours
- Eat low sugar and low-fat food
- Take medical test and check up

(02 *marks*)

(vi) Apply animations appropriately. (01 *mark*)

(vii) (*a*) Slide 4 – Insert the following text.

GOOD HEALTH IS SAID TO BE A KEY TO GOOD LIFE.

Make the font "Arial black", Colour "Blue", Font size 36 (02 *marks*)

(*b*) Add a video clip to the slide (Video clip is available in the presentation folder on your desktop). (02 *marks*)

(*c*) Save the presentation as healthylife. (01 *mark*)

(15 *marks*)

8. Watch two videos in the "Video_editing" folder on your desktop.

(i) Create a video for " The World Environment Day" from the given two videos which should be limited to 40 seconds. (06 *marks*)

(ii) Apply any effect to the video. (03 *marks*)

(iii) Specify "Protect our Environment" as the title of the created video. (02 *marks*)

(iv) Add a suitable animation to the title. (03 *marks*)

(v) Save the completed video file as "Nature" in the relevant folder. (01 *mark*)

(15 *marks*)

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9. (i) Open audio editing software and import the two audio files which are available in the folder named "audio" in desktop. (02 *marks*)

(ii) Using the above import files, create a background music for video. Which should be played not exceeded 20 seconds. (05 *marks*)

(iii) When you joining two audio files use effects 'fade in' and 'fade out'. (03 *marks*)

(iv) Name the created file as "backgroundmusic" in the appropriate folder. (01 *mark*)

(v) Loop the above created 'backgroundmusic' 3 times. (03 *marks*)

(vi) Name the final file as "Final_music" in the appropriate folder. (01 *mark*)

(15 *marks*)

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