

BCS Foundation Certificate in User Experience

Sample Paper 1

1 Hour Examination

Record your surname/last/family name and initials on the Answer Sheet, writing in block capitals at the top and marking the relevant letter in each column.

Attempt all 40 multiple-choice questions – 1 mark awarded to each question. Mark only one answer to each question. There are no trick questions.

A number of possible answers are given for each question, indicated by either **A. B. C.** or **D.** Your answers should be indicated on the Answer Sheet by making a **solid pencil mark** inside the box representing your chosen answer. These can be found to the right of the question number on your Answer Sheet. If you make a mistake, erase your first mark, and put a mark in your new chosen answer column for that question.

Pass mark is 26/40

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- 1 Which of the following has the **MOST** significant impact on determining the usability of a system?
- A Creating a user interface that is visually attractive.
 - B Understanding users and their needs.
 - C Ensuring the design is responsive on different platforms.
 - D Creating comprehensive help and documentation.
- 2 You are working on a Government system that allows people to apply for a driving license. Which of the following would be examples of user needs for such a service?
- A It should be easy to navigate.
 - B The font size should be at least 12pt.
 - C Apply for provisional entitlement to drive a lorry.
 - D It should work on mobile devices as well as desktop computers.
- 3 Which of the following are Usability Heuristics for User Interface Design, according to Jakob Nielsen?
- a Visibility of system status.
 - b Allow the user to change default values in form fields.
 - c Icons should be concrete and familiar.
 - d Make prompts brief and unambiguous.
 - e Match between system and the real world.
 - f Help users recognise, diagnose, and recover from errors.
- A b, c and f only.
 - B a, c and d only.
 - C b, d and e only.
 - D a, e and f only.
- 4 In a usability study, a researcher needs to understand where the user's point of gaze is directed while completing an on-screen form. Which technique is **MOST** appropriate?
- A A retrospective protocol.
 - B A/B testing
 - C Eye tracking
 - D A summative usability test

5 You are moderating a usability test. The participant asks you “How do I save my work?” What would be a suitable response?

A “How would you expect to save your work?”

B “Why do you want to save your work?”

C “Click on the ‘save’ icon.”

D “How often would you say that you save your work in a typical session?”

6 Which of the following aspects of usability are **MOST** important for each scenario? Match the choices.

1 An online multiplayer game used by teenagers.

2 A fingerprint identification system used by trained police officers.

3 A kiosk in a museum that helps visitors find an exhibit.

4 A call logging system used by trained call centre operatives.

W Task completion rate.

X Time to complete the task.

Y A rating scale to measure satisfaction with the task.

Z A count of the number of incorrect decisions.

A 1Y, 2Z, 3W, 4X.

B 1Z, 2Y, 3X, 4W.

C 1X, 2W, 3Y, 4Z.

D 1Y, 2X 3Z, 4W.

7 You are creating a form for a hotel booking system. One field is titled, “Select a type of room” and the possible answers are “Single”, “Double” and “Twin”. What would be the correct user interface control to accept responses?

A A set of radio buttons.

B A set of checkboxes.

C A free text field.

D A drop down menu.

8 The designers of a new in-flight entertainment system to be used on an aeroplane want to test out the user interface. Who would you recommend they recruit for a usability test?

A Ground staff at airports who speak with customers every day.

B People who own an interactive digital television in their home.

C People who have travelled on two or more long-haul flights in the last 6 months.

D Regular movie-goers who have been to the cinema at least once a month over the last year.

9 What are the benefits of low-fidelity prototypes?

- a They can be used to design user interface animations.
- b They encourage the design team to explore alternative designs.
- c They can be tested and refined quickly.
- d They can be used to assess technical feasibility before any code is written.
- e They can be developed by non-programmers.

- A** b, c and d only.
- B** b, c and e only.
- C** a, b and e only.
- D** a, d and e only.

10 Match the web site to its organisational scheme.

- 1** A web site that sells computers organises its information around 'Home', 'Small Business' and 'Enterprise'.
 - 2** An online financial services web site organises its functions around 'Send money' and 'Request money'.
 - 3** An online news site organises its information around 'World news', 'UK news', 'Sport' and 'Politics'.
 - 4** A search engine organises its content around web pages, images and videos.
- W** Topic categorisation.
 - X** Task categorisation.
 - Y** File format.
 - Z** Audience categorisation.

- A** 1Y, 2Z, 3W, 4X.
- B** 1Z, 2X, 3W, 4Y.
- C** 1X, 2Z, 3Y, 4W.
- D** 1W, 2Y, 3X, 4Z.

11 When trying to understand user requirements, why is it unsuitable to simply ask people what they want?

- A** Any designs resulting from these interviews will lack originality.
- B** User requirements need to be based on organisational goals.
- C** People do not have good insight into their needs from a system.
- D** User interviews are too complex to analyse in any meaningful way.

- 12** Which of the following data sets could be useful for recording quantitative data during usability evaluations?
- A** Success rates, error rates, observations about pathways users took.
 - B** Task time, error rates, satisfaction questionnaire ratings.
 - C** Task time, observations about pathways users took, problems experienced.
 - D** Success rates, problems experienced, satisfaction questionnaire ratings.
- 13** You are designing an interface for a Government system that will be used by a large number of users. Which design approach would be **MOST LIKELY** to be successful?
- A** Administer a survey to at least 1000 potential users to uncover the key demographic characteristics.
 - B** Include a wide range of functions to suit the most people.
 - C** Emulate design patterns from high traffic, social networking sites.
 - D** Design for specific groups of users with specific needs.
- 14** What might you analyse with monothetic agglomerative cluster analysis?
- A** The distribution of task times in a usability test.
 - B** The transcripts from a contextual inquiry.
 - C** Participant ratings in a usability questionnaire.
 - D** The data from a card sorting session.
- 15** You are evaluating a new interactive voice response system in which users are expected to make selections from a telephone keypad. Which one of the following research questions could be answered with a small number of participants (say 5)?
- A** Are users quicker with the new system or with the old system?
 - B** How much would people pay to use the service?
 - C** What are the demographic characteristics of the target audience?
 - D** What are the main usability issues with the system?

- 16** A new application is proposed, that enables individuals to look up all bus services within a small city. Which of the following would be the **BEST** user description to be used in the system design?
- A** A commuter who uses 3 buses a day each way to get to work, with short intervals to change between buses.
 - B** A 27-year old bus spotter, who is interested in the cumulative late running of services.
 - C** Police traffic control staff, interested in the effect of road-works and traffic lights on services.
 - D** An inspector for a bus operating company who wants to check on the performance of individual drivers.
- 17** Users are requested to indicate at the end of the on-line application which daily national newspaper(s) they read. Which would be the **MOST** appropriate user interface control to use?
- A** Check boxes.
 - B** Radio buttons.
 - C** Text box.
 - D** Drop down menu.
- 18** You are in the early stages of the design of an in-car entertainment system that will allow passengers to download and view movies. What would be your first step?
- A** Encourage the design team to think of various potential solutions to prevent them from becoming fixated on one design idea.
 - B** Explore the technical feasibility of using multi-touch, speech and head-up displays within an in-car environment.
 - C** Visit potential users to understand their current needs for such a system.
 - D** Create a paper prototype of a potential user interface and test it with users.
- 19** Eye tracking research shows that users' gaze patterns when reading web content tends to form what kind of shape?
- A** An "L" shape.
 - B** An "F" shape.
 - C** A "W" shape.
 - D** A "C" shape.

20 Which of the following are accurate descriptions of card sorting?

- a. With a closed card sort, participants aim to complete the activity within a fixed amount of time.
- b. With an open card sort, participants organise cards into groups that make sense to them.
- c. With a closed card sort, participants organise cards into predefined groups.
- d. With an open card sort, participants work in pairs to gain consensus on the group names.
- e. With a closed card sort, participants are drawn from a closed group of expert users.
- f. With an open card sort, participants can create as many or as few groups as they wish.

- A** b, c and e only.
- B** b, c and f only.
- C** a, d and f only.
- D** a, d and e only.

21 Which of the following are adequate descriptions of potential user groups for a mobile phone app that helps people plan and cost out a kitchen redesign?

- a. Homeowners who use a computer every day.
- b. Landlords who have renovated their kitchen in the last 12 months.
- c. Builders who expect to renovate a kitchen in the next 12 months.
- d. Homeowners who about to commission a building firm to renovate an existing property.
- e. Plumbers who use a smart phone.

- A** c and d only.
- B** a, b and e only.
- C** b, c and e only.
- D** a and d only.

22 What role do design experiments play when creating products?

- A** Design experiments help the design team validate their learning about customers.
- B** Design experiments encourage the design team to get face-to-face with users.
- C** Design experiments guarantee that design decisions are statistically significant.
- D** Design experiments ensure that the development team is working within an Agile framework.

- 23** Which law states that the time required to move to a target is a function of the target size and distance to the target?
- A** Hick's Law
 - B** The power law of practice
 - C** Fitts' Law
 - D** Nielsen's Law
- 24** Which of the following are useful objectives from a usability test?
- a. Check the system is easy to use.
 - b. Ensure users understand the terminology.
 - c. Assess if the user experience is acceptable.
 - d. Decide if one version of the interface is more usable than another version.
 - e. See if users can export their saved files with the web version of the user interface.
 - f. Discover usability issues with the user registration process.
- A** a, b and d only.
 - B** c, e and f only.
 - C** a and c only.
 - D** b, d, e and f only.
- 25** The practice of creating strong lines that keep the viewer focused and cause the page to look elegant exploits which principle of visual design?
- A** Contrast.
 - B** Repetition.
 - C** Proximity.
 - D** Alignment.
- 26** A design team in the early stages of the design of an in-store shopping basket with a digital interface has approached you to carry out user research. They suggest you interview 10 of their internal staff who regularly shop in supermarkets. How should you respond?
- A** 10 users is too few to collect adequate data.
 - B** It would be better to observe staff as they shop.
 - C** It would be more cost effective to run a focus group than separate interviews.
 - D** Any research should be carried out with real users, not internal staff.

27 The team has collected together a set of features and functions for a system. This information is to be classified by users, grouped as users see fit. What kind of technique is this?

- A** Closed card sort.
- B** Richard Wurman's LATCH technique.
- C** Open card sort.
- D** Empathy Map.

28 You are at the early design stage of a new system that will make significant changes to the way users carry out their work. The design team would like feedback on three alternative design ideas. Which user research technique would be **MOST** suitable?

- A** Carry out a structured interview with existing users.
- B** Carry out a usability test with a high fidelity prototype.
- C** Run an online survey with existing users.
- D** Carry out a usability test with a low fidelity prototype.

29 Place the following stages of a usability test in order.

- a. Recruit users.
- b. Agree the test objectives.
- c. Run a pilot test.
- d. Create task scenarios.

- A** a, b, c, d.
- B** b, a, d, c.
- C** a, d, b, c.
- D** b, c, d, a.

30 What are the components of the context of use?

- A** Users, UX vision and testing.
- B** Users, environments and tasks.
- C** Users, Personas and KPI.
- D** Users, prototyping and testing.

31 You are moderating a usability test. The participant has been working quickly through a test task but then pauses for a while. Which of the following would be suitable prompts?

- a. What are you thinking right now?
- b. If you were the designer, how would you have designed this screen?
- c. Are you looking for the 'Help' function?
- d. Please remember to think out loud.
- e. Let's stop this task here and come back to it later.
- f. What do you want to see here?

A a and d only.

B b and f only.

C a, c, e and f only.

D b, c, d and e only.

32 Match the following terms to their definitions.

1 Saccade.

2 Gaze plot.

3 Heat map.

4 Fixation.

W A representation of the different areas of the screen where the user has spent the most time looking.

X A pause of the eye movement on a specific area of the visual field.

Y A moment-by-moment representation of a user's eye movement across the screen.

Z Rapid eye movements.

A 1X, 2W, 3Y, 4Z.

B 1X, 2Y, 3W, 4Z.

C 1Z, 2Y, 3W, 4X.

D 1Z, 2W, 3Y, 4X.

- 33** Identify the key user needs in this pen portrait of a user for a GPS system aimed at hikers:
- a. Peter has been a keen walker since he was a teenager.
 - b. He enjoys purchasing the latest gadgets and technology.
 - c. He wants to discover out-of-the-way sites with an interesting history.
 - d. He says he needs a mobile phone provider with better coverage in out-of-the-way locations.
- A** a and b only.
B b only.
C c and d only.
D c only.
- 34** The design team are struggling to decide whether to use a set of radio buttons or a drop down menu to help users chose from a list of about 8 items. What would you advise?
- A** Choose a drop down menu as this will reduce the amount of screen real estate needed for the control.
B Choose radio buttons as this will expose all of the options to users without them having to click to see the choices.
C Prototype both alternatives and observe how users interact with the controls in an upcoming usability test.
D Design a new control that combines the best of both approaches.
- 35** A researcher asks a participant to carry out tasks with a hand drawn interface, where the participant uses his finger as a mouse. What technique is the researcher using?
- A** Paper prototyping.
B Sketching.
C Retrospective protocol analysis.
D Design studio.
- 36** Which standard published by the International Organisation for Standardisation addresses the usability of systems?
- A** ISO 9241.
B ISO 9001.
C ISO 2491.
D ISO 1009.

- 37** What is 'affordance'?
- A** The practice of creating strong lines that keep the viewer focussed and cause user interface screens to look elegant.
 - B** A question where the participant has to choose his answer from among a proposed list of responses. No other answer than the ones proposed are allowed.
 - C** A visual design technique where the object of attention is made very different from the other elements that surround it.
 - D** The properties of an object that suggest to people how the object can be interacted with.
- 38** A web site that sells organic food organises its produce by the area of the country from where the food originates. What organisational scheme is it using?
- A** Time.
 - B** Category.
 - C** Location.
 - D** Hierarchy.
- 39** Which of the following tasks would be suitable to use in a usability test of a stylus-based tablet input device aimed at digital illustrators?
- a. You have just received your new tablet device. Install the product and check that it works correctly.
 - b. Configure the tablet for left-handed use.
 - c. Open the software extension for the tablet and set the Mapping Mode to 'Pen'.
 - d. Adjust the feel of the eraser to the point where it feels hard.
 - e. Compare the responsiveness of the device when used over Bluetooth and when connected via USB.
- A** c, d and e only.
 - B** a, b and d only.
 - C** a and b only.
 - D** d and e only.

40 In the context of user centred design, what are some of the benefits of personas?

- a Personas engage the design and development team.
- b Personas focus the design on specific user groups.
- c Personas help the design team make better design decisions.
- d Personas help the design team create an interface for an average user.
- e Personas identify the key segments for our sales and marketing efforts.

A a, b and c only

B a, b and d only

C b, c and e only

D c, d and e only

-End of Paper-