## **Eton College King's Scholarship Examination 2020**

# **GENERAL I**

(One and three-quarter hours)

#### Remember to write your candidate number on every sheet of answer paper used.

#### You must answer all three questions.

Each of the three questions is worth the same number of marks.

You need not answer the questions in the order set, but you must start each one on a separate piece of paper.

If you have not finished a question after 35 minutes, you are strongly advised to leave it and go on to another. Return to any unfinished questions if you have time left at the end of the paper.

**ADDITIONAL MATERIALS: NONE** 

Do not turn over until told to do so.

#### **GENERAL I**

## **Question 1**: START A NEW SHEET OF PAPER NOW.

If you have not finished this question after 35 minutes, you are strongly advised to leave it and go on to another.

Source: images of chess pieces of varying designs







This question does not assume and its assessment will not reward additional knowledge of the game of chess.

Chess is a board game for two players who control pieces of various figures representing stylized armies on sixty-four black and white squares arranged in an 8x8 grid. The opponents' sets of pieces differ only in colour and are usually either white or black. Play cannot begin without a complete set of each colour. In play, opponents take turns to move their pieces across the grid. Each type of piece moves differently: one such piece, the KNIGHT, represents the cavalry and moves across the board in a distinctive 'leaping' fashion.

(a) Look carefully at the images in Sources 1-5 on page 2.

The pieces in these images could be used as the knight in a game of chess. Giving reasons for your choices, explain which ONE of these five designs you would most prefer to use in play and which ONE you would least wish to use.

[4]

(b) Two boys decide to play chess. On discovering that their chess set lacks one of the knights, they agree to use a yellow button to replace the piece in question. Explain how it is possible for the game to be played in these circumstances.

[4]

(c) The moves available to a chess piece in play are in part determined by its position on the board of black and white squares relative to other pieces. Each type of piece is able to 'capture' others positioned on squares to which it can itself move. As play proceeds, pieces are removed from the board if they are in the range of attack of any of the opponent's pieces and are not moved to a square which is not under challenge. The game concludes when either player's KING is challenged but is unable to be moved to a square free of challenge from the opponent's pieces.

What difficulties would the boys encounter in trying to play chess with a complete set of pieces but with no board? Suggest some ways in which these difficulties might be overcome by the players and how the game might be affected.

[5]

(d) We are all influenced to some extent by the context of the cultures and historical times in which we live. How far it is possible for art or writing to communicate meaningfully to those from other cultures and periods?

Support your ideas with detailed examples.

[12]

[Total mark for Question 1: 25]

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#### **Question 2**: START A NEW SHEET OF PAPER NOW.

If you have not finished this question after 35 minutes, you are strongly advised to leave it and go on to another.

Some fictitious Etonians explored the Arctic some two centuries ago. There, they encountered and documented *Sedna*, a rare mythical language spoken by the Inuit tribes. The explorers noted that the Sedna rendering of tense is simple, yet word order is relatively flexible (except when adverbs or possessives occur). They learnt that there are no articles ("the, a, some" etc.) in Sedna. It was noted that Sedna shares many of the same sounds as English; the explorers were surprised that they even encountered the unvoiced 'th' (like at the start of "thistle") as well as its voiced equivalent 'TH' (like at the start of "THis") that are commonly found in English.

### Sedna examples:

1	acalile erehama dojib	The girl sings a song.
2	hucha' dereg vi aboruke urijuku	My boy played a game.
3	bathad eselithe acalili	The giant knows the girl.
4	acaliloke aburuku bathad	Some girls know the boy.
5	hulescha' dojib tchi erahamoka eselithoke	The giants will sing their songs.
6	hucha' girizd fi esilaca aburuke	A boy wrote my story.
7	hucha' tereg urijuku	The game was played yesterday.
8	hulescha' tojib thi erahamoka	His songs will be sung tomorrow.
9	esalacoka kling fi urujuku suthuz	The stories about my game are read.
10	deva' hucha' pathad fi aboruku	My boy was known here.
11	tchi obechoko kirizhd	Their book is written.
12	hucha' zuthuz acalile fi obechoko	A girl read my book yesterday.

- (a) Give the meaning or function of the following:
  - (i) deva'
  - (ii) hucha'
  - (iii) hulescha'
  - (iv) "ok" in "erehamoka"

[4]

- (b) Describe the circumstances when the following are used.
  - (i) "fi" vs "vi"
  - (ii) "dojib" vs "tojib"
  - (iii) "aburuku" vs "aboruke"

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- (c) Translate the following from Sedna
  - (i) zuthuz esalacoka aburukoke
  - (ii) hucha' kirizhd tchi erahamoka
  - (iii) hulescha' bathad fi esilaca eselithe
  - (iv) deva' THi acililoke tchi obechokoko girizd

[7]

- (d) Translate the following to Sedna
  - (i) The giant writes a story.
  - (ii) The songs about the girl were sung.
  - (iii) My games were played here.
  - (iv) The girls will know their stories about the boys.
  - (v) Here the giants will know his songs about the games.

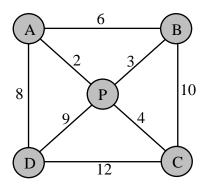
[11]

[Total mark for Question 2: 25]

#### **Question 3**: START A NEW SHEET OF PAPER NOW.

If you have not finished this question after 35 minutes, you are strongly advised to leave it and go on to another.

Postman Pat delivers mail to each of Anna, ('A'), Ben, ('B'), Charlie, ('C') and Daisy, ('D') from his post office, ('P'). A map of the road network connecting them, with the distances of each road link (in miles) is shown. Pat usually starts his route by going to the first customer possible alphabetically, (usually, but not always, Anna) and then proceeding round either clockwise or anticlockwise. He starts and ends at P.



A possible route might be labelled 'PAPBCDP' or illustrated as shown:



- (a) Pat has mail to deliver to all four.
  - (i) Find Pat's shortest route.
  - (ii) There are three possible routes that all have the same length. Find them.
  - (iii) Pat takes a route that is an odd number of miles. Is the number of times he returns to the post office between starting and finishing his round even, odd, or could it be either?

[10]

- (b) Pat uses a bicycle rather than his van (as it is more environmentally friendly), but this means that although he can carry any number of letters, he can only carry two parcels at once, so sometimes he needs to return to the post office mid-round.
  - (i) He has one parcel for each of three customers, and nothing for the fourth, and finds that he can make all the deliveries in just 18 miles. Who are the parcels for, and what is his route?

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- (ii) The next day he again has one parcel for each of three customers, and nothing for the fourth, but finds that he cannot make the deliveries in less than 31 miles. Who are the parcels for today?
- (iii) On another day he has one parcel for each of three customers, but letters for all four of them. His minimum round is 33 miles. Who are the parcels for today?
- (iv) The following week, there are roadworks on one section of road, making it one way only. Pat now finds that the minimum distance required to deliver one parcel to each of the four customers is the same as the distance required to deliver two parcels to each of them was before the roadworks were put in. Which section of road has the roadworks?

[15]

[Total mark for Question 3: 25]

**END OF PAPER** 

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